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State of California
THE RESOURCES AGENCY
Department of Water Resources

BULLETIN No. 94-6

LAND AND WATER USE IN
KLAMATH RIVER
HYDROGRAPHIC UNIT

Volume I: Text

MAY 1965

HUGO FISHER
Administrator
The Resources Agency

EDMUND G. BROWN
Governor
State of California

WILLIAM E. WARNE
Director
Department of Water Resources

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FOREWORD

In 1956, the State Legislature declared:

"... that in providing for the full development and utilization of the water resources of this State it is necessary to obtain for consideration by the Legislature and the people, information as to the water which can be made available for exportation from the watersheds in which it originates without depriving those watersheds of water necessary for beneficial use therein ..."

The Department of Water Resources was directed to conduct the necessary investigations to compile this information.

For purposes of these studies, the major drainage areas of the State were delineated. Division of these drainage areas into subareas, designated hydrographic units, was then made. The hydrographic units, which generally comprise watersheds of individual rivers, serve as the basic unit for collection and reporting of data.

The investigation is being conducted in two phases: (1) collection and publication of data on land and water use, and (2) determination and reporting of water resources and future water requirements. Collection and processing of basic data for both phases, by hydrographic units, is underway in much of the State.

The land and water use and land classification data are being published as the Bulletin No. 94 series, covering individual hydrographic units. These bulletins are distributed in preliminary editions and reviewed at public hearings. Final editions are then published including necessary revisions resulting from comments submitted at and following these hearings. These bulletins are an essential source of data for the subsequent water requirements studies, and when complete, will provide detailed data for the entire State.

This report is the sixth of the series and is the final edition of Bulletin No. 94-6 following public hearings held in the Klamath River Hydrographic Unit in April 1964.

The second phase of the investigation begins with an inventory of water resources in each drainage area, including streamflows, ground water, and water quality characteristics. Estimates of future water requirements, based on the land and water use studies and projections of foreseeable future development, are now underway in some areas. Results of these water resources and water requirements studies will be published as Bulletin No. 142 series, each covering some or all of the hydrographic units within a drainage area.

These water resources and future water requirements bulletins will provide the basis for outlining the additional projects needed to meet the State's growing water needs. By interrelating the projected water requirements of all areas of the State with the available local supplies, by decades, a recommended sequence and timing for the State's future water development plans will be established. Besides thus forming the chief basis for the Department of Water Resources' all-important project staging program, the data on water resources and water requirements will be a most valuable guide for water development planning by federal and local, as well as state agencies.

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2. Land and Water Use
3. Classification of Lands

DEPARTMENT OF WATER RESOURCES

P.O. BOX 388
SACRAMENTO

March 17, 1965

Honorable Edmund G. Brown, Governor,
and Members of the Legislature
of the State of California

Gentlemen:

Bulletin No. 94-6, "Land and Water Use in Klamath River Hydrographic Unit", presents detailed data in the hydrographic unit pertinent to land use and classification of lands as related to water as well as water use consisting of descriptions of surface water diversions and apparent water rights. Maps of present land use, surface water diversions, and land classification illustrate the text. In addition, the bulletin includes notes on the history, natural features, climate, and economy of the unit.

The studies reported herein were conducted pursuant to legislation enacted in 1956 and codified under Section 232 of the Water Code. These data will provide a factual basis for decisions of concerned interests regarding the development and use of water resources of the Klamath River Hydrographic Unit.

This report is one of a series which, when completed, will form a most valuable reference to the water resources of the State in relation to the various classes and uses of land resources. Future estimates of the amount of water which can be used beneficially in each watershed will be based upon the data contained in this series of reports together with related information from other sources.

In March 1964, the preliminary edition of this bulletin was released. In April 1964, its contents were discussed at public hearings, held in the Klamath River drainage area. This final edition incorporates revisions based on comments made at these hearings, written comments, and further field investigation.

Sincerely yours,

A handwritten signature in cursive script, reading "William E. Warne".

Director

STATE OF CALIFORNIA
THE RESOURCES AGENCY
DEPARTMENT OF WATER RESOURCES

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ACKNOWLEDGMENT

The Department of Water Resources gratefully acknowledges information contributed by the numerous water users and residents of the Klamath River Hydrographic Unit and various agencies of the federal, state, and local governments.

Special mention is made of the helpful cooperation of the Forest Service, United States Department of Agriculture, and the Farm Advisors for Del Norte, Humboldt and Siskiyou Counties.

The Department particularly appreciates the assistance of Mr. Sedgely D. Nelson, Siskiyou County Farm Advisor, with the collection of supplementary data following the public hearing.

PUBLIC HEARINGS
on
Preliminary Edition
of
Bulletin No. 94-6
Land and Water Use in Klamath River
Hydrographic Unit

In accordance with Section 232 of the Water Code and the Department of Water Resources' policy, three public hearings were held in April 1964 to receive comments on the preliminary edition of Bulletin 94-6, "Land and Water Use in Klamath River Hydrographic Unit". Mr. Robert E. Foley, Chief, Special Investigations Section, Northern Branch, assisted by other Water Resources personnel conducted these hearings.

The first hearing, held April 14, 1964, in the Siskiyou County Courthouse, Yreka, California, was attended by 21 members of the public. Comments and/or data leading to modification of the preliminary edition were submitted by the following persons:

Mr. George Marion Grieb, Hornbrook, California
Mr. M. V. Maxwell, Chairman, Siskiyou County
Resources Board, Yreka, California
Mr. Sedgely D. Nelson, Farm Advisor, Yreka, California

Following this hearing, Mr. Sedgely Nelson arranged a special meeting and assisted Department personnel in receiving additional data with regard to surface water diversions. Nine additional diversion systems were included, and revisions were made relative to 24 already listed. Tables 4, 6, 7, and 8 and Plate 2 were revised accordingly, in addition to minor revisions elsewhere in the report.

The second hearing, held April 15, 1964, in Klamath, California, was attended by 12 members of the public. The third hearing was also held April 15, 1964, in Eureka, California. This meeting was attended by 15 members of the public. No comments or data requiring modification of the preliminary edition were made at either of these two hearings.

CHAPTER I. INTRODUCTION

This bulletin presents basic data on land and water use in the Klamath River Hydrographic Unit. These data cover present land and water use, classification of lands, systems used to divert surface waters, histories of diversions, apparent water rights pertinent to each diversion, purposes and extent of use of diversions, seasonal quantities of water diverted during 1958, and an estimate of present consumptive use of water in the unit. A general description and brief history of the area are also included.

These basic data were gathered during the period 1958-59 in compliance with Chapter 61, Statutes of 1956, as amended by Chapter 2025, Statutes of 1959, and codified in Section 232 of the Water Code of the State of California. This legislation provides for an inventory of water resources and water requirements of the State. This is the sixth in a series of bulletins being prepared under this authorization. The text of Section 232, with a discussion of its history and implications, is included in this bulletin as Appendix A.

These data will provide the basis for future determination of the quantities of water reasonably required for future beneficial use in the Klamath River Hydrographic Unit. Estimates of these quantities have been made and presented in Department of Water Resources Bulletins No. 58, "Northeastern Counties Investigation," June 1960, and No. 83, "Klamath River Basin Investigation," May 1960. Final determinations will be based on estimates of (1) future land use, (2) economic patterns, (3) population, (4) industrial and agricultural development, and (5) recreational needs.

The data presented herein have been reviewed in preliminary form by interested local water users. Changes submitted by these water users were reviewed in the field and adjustments were made where warranted.

Organization of Report

This bulletin consists of five chapters, three appendixes, and three plates. Chapter I contains a general description of the Klamath River Hydrographic Unit. Chapter II, "Water Use," presents data on surface water diversion systems, related water rights information, measurements of quantities of water diverted, and an analysis of consumptive use. Chapter III, "Land Use," includes tables of present land use and irrigated lands. Chapter IV, "Land Classification," includes a tabulation of lands classified as to their potential for irrigated agriculture and for recreational purposes. Chapter V summarizes the report.

Appendix A presents the text of Section 232 of the California Water Code and a discussion of the pertinent responsibilities and work program of the Department of Water Resources. Appendix B lists related investigations and other references pertinent to the Klamath River Hydrographic Unit. Appendix C, "Legal Considerations," presents a short summary of California water law, a review of litigation involving water rights in the Klamath River Hydrographic Unit, and a tabulation of applications to appropriate water in the unit.

Plate 1 is a map showing the general location of the Klamath River Hydrographic Unit. Areas of present land uses and the location of diversion systems are shown on Plate 2. Classes of lands are shown on Plate 3.

Location

The Klamath River Hydrographic Unit is one of the most northerly units in the State. For approximately 75 miles its northern boundary coincides with the California-Oregon border. The unit includes the area drained by the Klamath River, the Salmon River, and the lower 20 miles of the Scott River, and includes 234 square miles of Del Norte County, 523 square miles of Humboldt County, and 2,605 square miles of Siskiyou County, for a total area of 3,362 square miles. The unit is bounded by the watersheds of the Smith River on the northwest, Butte Creek on the east, Shasta, Scott, and Trinity Rivers on the south, Redwood Creek on the southwest, and the Pacific Ocean on the west.

The Klamath River, draining approximately 15,000 square miles, originates in Upper Klamath Lake in southern Oregon, which is fed primarily by the Wood and Williamson Rivers from the north and the Sprague River from the east. From Upper Klamath Lake, the river flows southwesterly into California, where it is joined by the Shasta River about 12 miles below the Oregon border, by the Scott River near Hamburg, the Salmon River at Somes Bar, and the Trinity River at Weitchpec. From here the river flows northwesterly about 42 miles to the Pacific Ocean at Requa.

For purposes of this report the Klamath River Hydrographic Unit has been divided into 14 subunits, shown on Plate 1, "Area of Investigation". The area of each subunit is shown in Table 1.

TABLE 1
AREA OF SUBUNITS IN
KLAMATH RIVER HYDROGRAPHIC UNIT
(in square miles)

Subunit	: Del Norte : County	: Humboldt : County	: Siskiyou : County	: Total
Applegate River	0	0	91	91
Beaver Creek	0	0	264	264
Cecilville	0	0	289	289
Copco Lake	0	0	100	100
Happy Camp	0	0	240	240
Hornbrook	0	0	269	269
Klamath Glen	199	300	0	499
Salmon River	0	0	103	103
Sawyers Bar	0	0	203	203
Scott Bar	0	0	151	151
Seiad Valley	0	0	200	200
Somes Bar	0	1	531	532
Weitchpec	35	222	16	273
Wooley Creek	0	0	148	148
TOTALS	234	523	2,605	3,362

Historical and Present Development

Economic and cultural development in the Klamath River
Hydrographic Unit resulted from the activities of nations and individuals
seeking to profit from the abundant natural resources of the area.

Governments of Mexico, England, Spain, and Russia have at various times in the past, had interests in the northern coast of California. Expeditions were dispatched from Lower California, Mexico, and abroad to explore this new area. The English captain Sir Francis Drake, sailed up the Pacific Coast perhaps as far as the Klamath River in 1579. Sebastian Visciano explored the coast in 1603. Bruno de Haceta and Juan Francisco de la Bodega y Quadra sailed up the coast from New Spain in 1775. In the fall of 1826, a trapper from the Hudson's Bay Company, Peter Skene Ogden, set out from Fort Vancouver on the Columbia River for the region of the "Clammitte." His diary gives the earliest account of white men in the area north of Mount Shasta. In 1828 Captain Jedediah S. Smith headed a trapping expedition overland from a fort near the Great Salt Lake to the Northern California coast. On May 25, 1828, his party crossed the Klamath River near the present town of Klamath.

Development of the upper reaches of the Klamath River is associated with the development of the interior valleys of Siskiyou County and the natural resources. The development of the Lower Klamath River in Humboldt and Del Norte Counties is oriented toward the Pacific Ocean and the coastal area. The interior valleys and the coastal area are separated by many miles of mountains which once formed an effective barrier.

The development of the Lower Klamath River region was temporarily delayed by the discovery of gold in 1848 in the Mother Lode region of the Sierra Nevada. However, in 1850 gold was also discovered

on the beach of Gold Bluff about 10 miles south of the mouth of the Klamath River. Although development of the Gold Bluff area proved to be unprofitable, settlement of the area was given impetus by the many miners pushing inland to the rich gold-bearing areas of the Klamath River.

At the time of admission of California into the United States (September 9, 1850), the State was divided into 27 counties.^{1/} Each of these counties encompassed a vast but sparsely settled area. The extreme northern portion of the State was divided into Trinity County on the coast and Shasta County on the east. In 1851, Klamath County was formed from the northern half of Trinity County, and in 1852 Siskiyou County was formed from the northern half of Shasta County and a portion of the newly-formed Klamath County. The western portion of Trinity County became Humboldt County in 1853. Del Norte County was formed from the northern portion of Klamath County in 1857, and in 1875 Klamath County was dissolved, its remaining territory being divided between Humboldt and Siskiyou Counties. It is the only organized county of the State to have been dissolved.

In 1851 the town of Klamath City was established as a port of entry for goods mostly destined for the miners in the upstream areas of the Klamath River. Frames for buildings were prefabricated in San Francisco and shipped to Klamath City by schooner. Miners and traders came in great numbers expecting to find easy access to the rich bars on the Klamath River. However, the city was short-lived, for when the miners did not meet with immediate success, they moved on to richer areas.

^{1/} Frances Turner McBeth, "Lower Klamath Country"

Orleans Bar, now called Orleans, was once a mining center on the Klamath River. It was also the county seat of Klamath County from 1855 until the county was dissolved in 1875. The two previous county seats were the cities of Trinidad (from 1851 to 1854) and Crescent City (from 1854 to 1855).

Prominent mining camps were established along the Salmon River at Forks of Salmon, Sawyers Bar and Cecilville. During the winter seasons mules shod with snowshoes plodded over the 6,000-foot Jackson Peak Pass to provide communication between the Salmon River region and Yreka.

Happy Camp was located in the midst of a continuous belt of hydraulic mines along the Klamath, there being as many as three river channels exposed along this course. These old riverbeds were rich with gold and afforded ideal hydraulic mining conditions. One of the largest mines in Northern California was the Van Bruant Mine located at Happy Camp. The old mine site is now the Happy Camp Airport.

Seiad Valley, once called Seiad Ranch, was originally settled in 1854 by a New York gentleman named William B. Reeves who used the fertile valley to grow potatoes. The valley is two miles long and one mile wide.

Gold mining was carried on from the mouth of the Klamath to Hornbrook where the gold-bearing formations give way to overlying, newer volcanic materials to the east. Gold was found to be scarce in these volcanic formations; consequently very little early development took place east of Hornbrook and Henley.

Fifteen years after the discovery of gold, the large, rich placer mines in the Klamath River Hydrographic Unit were mostly

worked out and mining was concentrated on the bars along the river and the riverbed proper. Mining of the riverbed was accomplished by partially damming the river, exposing enough bed to provide one season's work. For many years mining was carried on by reworking the old placer ground.

As the gold deposits became worked out, most of the miners moved on to more lucrative areas, leaving many of the once busy mining camps deserted.

During the height of the gold rush along the Klamath River, many of the settlers began to plant crops, raise livestock, and develop the abundant timber resources of the area. These people remained in the area after the gold deposits diminished to concentrate their efforts on agriculture, trade, and commerce. Irrigation water was supplied through old mining diversion systems, some of which are in use today.

Most of the agriculture was carried on for local consumption until transportation facilities were improved by the advent of the Marysville to Portland rail line. Before the rail line existed, the primary means of transportation was by horseback and the stage routes through the region, but the cost of shipping agricultural products in large quantities by stage was prohibitive.

Agriculture has not become a major economic factor in the Klamath River Hydrographic Unit for two reasons: (1) scarcity of suitable land, and (2) poor access to the land that is suitable for growing crops. For these reasons the only agricultural product developed for export to any extent has been livestock. Of the 43,390 acres in the hydrographic unit classified as irrigable, 6,700 acres or

15.4 percent, had irrigation facilities in 1958. In addition, there were 13,240 acres dry-farmed during 1958, of which 12,560 acres were in the vicinity of Hornbrook.

The lands classified as irrigable are small parcels scattered along the Klamath and Salmon Rivers and some of the larger tributaries such as Cottonwood and Seiad Creeks. This plus a generally short frost-free period and moderate to heavy winter rainfall, minimizes the effectiveness of irrigation.

The first fishery in the unit to engage in the business of catching and salting fish for market was established on the Klamath in the fall of 1876. This commercial fishing industry, which flourished for 50 years at the mouth of the river, provided employment for many of the Indians for a few months each year. Fish were caught, salted or canned, and shipped out by small schooners or streamers which were able to navigate the river despite the sandbars which often formed at the mouth. Commercial fishing was discontinued on the Klamath River about 1925.

There are three major hydroelectric powerplants in the hydrographic unit which are owned by the California-Oregon Power Company. Two of these plants are on the Klamath River near the town of Copco and the third is on Fall Creek near its confluence with the Klamath River. These plants are part of a system that serves northeastern California and southeastern Oregon. In 1952, the power output of these three plants was 390,000,000 kilowatt-hours, more than 90 percent of the company's total hydroelectric production.



Confluence of Grouse
Creek and Klamath
River



Irrigation Along
Horse Creek

The Klamath River Hydrographic Unit contains 1,510,000 acres classified as commercial timberland by the U. S. Forest Service with an estimated potential yield of 41,300,000,000 board feet. The percent of timber cover in different localities within the unit varies considerably. The Del Norte County portion of the hydrographic unit is about 92 percent forested; Humboldt County about 82.5 percent forested; the Salmon River drainage area is about 76 percent forested; and the remaining Siskiyou County portion of the hydrographic unit is approximately 65 percent forested.

These areas within the hydrographic unit vary in percentage of acreage in commercial timberlands and in the relative density of the forest lands. In general, the areas with greater percentages of commercial forest lands also have the denser stands. These are: Del Norte County portion, 38,000 board feet per acre; Humboldt County portion, 36,000 board feet per acre; Salmon River area, 25,000 board feet per acre; and the remaining portions of Siskiyou County, 23,000 board feet per acre.

The western area is more heavily forested because of its higher rainfall and its lack of development before 1950. The western area's forests are primarily of Douglas fir with stands of redwood. In the eastern portion of the hydrographic unit the forests contain a preponderance of mixed pines, firs, and Douglas fir, typically less dense than fir and redwood forests.

The eastern area has a long history of logging and milling operations while the western portion has had almost its entire development since 1950. In the area east of Seiad Valley, mills were operating prior to 1915, and production from that area has remained relatively



Copco Lake and
Powerhouse #1,
California-Oregon
Power Company



Lumber Mill at
Town of Klamath

constant in recent years. The more recent harvesting in the western forest has been conducted on a more controlled basis, both on private and public lands.

The Klamath River Hydrographic Unit has an economy which is based primarily on forest resources. The total manufacturing capacity in 1958 amounted to 232,000,000 board feet of rough lumber, 57,000,000 feet of remanufactured lumber, and 297,000,000 square feet of veneer. These figures represent an aggregate increase in wood products manufacturing capacity of about 85 percent over that of 1950.

Between 1950 and 1958 the increase in lumber processing facilities in the western portion of the unit amounted to three saw-mills, one remanufacturing plant, and four veneer plants. Although the total number of wood processing plants in the hydrographic unit approximately doubled between 1950 and 1958, the U. S. Forest Service estimate of sustained yield potential of the basin is probably no more than two-thirds utilized at present. An estimated 175,000,000 board feet of logs from this area were processed outside the area in Arcata and Crescent City and in southern Oregon during 1956. Prior to 1950 very few, if any, logs from this area were processed outside the basin.

The inland, or eastern Siskiyou County portion of the Klamath River Hydrographic Unit has been oriented historically toward the development of its mineral resources and is still the primary mineral producing area in the basin. However, the mining industry since World War II has been relegated to a secondary position in the unit's economy. In 1948 total mineral production in the unit is estimated to have been about \$500,000 and in 1958 about \$350,000.

Gold ore and chromite have been the principal minerals produced in the unit during the past 15 years, although minor amounts of platinum, copper, lead, mercury, and gravel have also been produced. Gold, particularly in placer deposits, is found throughout the basin, although the lode zone is entirely in the interior portion. The poor condition of the gold market since World War II has been responsible for closing almost all of the lode mines except the Siskon Mine near Happy Camp. Although gold, both placer and lode, still leads in value, its production is only a fraction of that prior to 1942. Chromite is primarily a strategic mineral and its production has been high during government stockpiling periods. Since 1954, this production has consistently decreased as present stockpiles were built up. The second largest known chromite ore body in the State is the Seiad Creek development which is estimated to have at least 266,000 tons of 6 percent trioxide ore reserves. Sand and gravel deposits in this region are abundant but development of them has been limited primarily to local road construction projects.

Copper production has been the most significant of the minor minerals. Both the Blue Ledge Mine near Seiad Valley and the Gray Eagle Mine near Happy Camp have produced large quantities of copper. Platinum in varying amounts has been recovered during gold dredging operations along the Klamath River. Small amounts of lead have been obtained as a by-product of copper mining at the Blue Ledge Mine and small quantities of mercury have been produced from the Beaver Creek area.

The recreational assets of the Klamath River Hydrographic Unit are abundant and highly varied. The principal present recreational uses are stream fishing, camping, and deer hunting.

It is estimated that during 1955 there were 300,000 visitors who expended \$25,000,000 in the unit. Approximately 50 percent of these were engaged in trout and salmon fishing, 10 percent in big game hunting, and 40 percent in other recreational activities such as hiking, camping, picnicking, and sightseeing.

Steelhead trout fishing is seasonally quite intense in the rivers of the unit. Other forms of recreation in the unit are not highly developed considering the vast area of forested public lands in the basin. Resorts along the river cater mainly to fishermen. There are areas suitable for winter sports but these are generally inaccessible. River boating is dangerous except in the lower portions, due to the number of rapids in the river. Although recreation is currently the second largest industry in the unit, further development, except in the coastal portion, will be limited until sufficient access roads are constructed.

Transportation is quite limited in the unit. A Southern Pacific main rail line from California to Oregon runs about 15 miles through the northeastern portion of the unit. There is no commercial air service, and there are no publicly owned airfields. Water transportation is restricted to rafting of logs on the lower portion of the Klamath River. State Highway 96 follows the Klamath River from the northeastern segment of the unit to Weitchpec in Humboldt County. State Highways 99 and 101 traverse the eastern edge and the western or coastal edge, respectively, for approximately 15 miles each. There are few county roads in the unit, the largest network of roads being logging roads. The U. S. Forest Service also maintains a network of roads throughout national forest lands.



Gray Eagle Mine
Near Happy Camp



Recreation on the
Klamath River

(Courtesy Trees Motel Near
Town of Klamath)

There are no incorporated towns in the Klamath River Hydrographic Unit. The majority of the population in the unit forms small semiurban clusters within the small valleys tributary to the Klamath River and in the valley plain areas along the river itself. These clusters, none of which has a population over 750, tend to form near sawmills, veneer plants, resort areas, or road junctions.

Natural Features

The Klamath River Hydrographic Unit covers an area of 3,362 square miles within the confines of Del Norte, Humboldt, and Siskiyou Counties in the northwest portion of the State. The unit varies in elevation from sea level at the mouth of the Klamath River near Requa, to 8,966 feet above sea level at the headwaters of the South Fork of the Salmon River in the Trinity Alps.

The easternmost portion of the unit lies within the Cascade Range. Rocks consist primarily of Tertiary volcanic flows with minor amounts of Cretaceous marine sandstone and shale. The Klamath River system is deeply entrenched in the nearly flat-lying volcanic rocks. Progressing westward into the Klamath Mountains, the rocks range in type from granitics to metamorphics, including serpentine, and in age from pre-Silurian to late Jurassic. Geology of this area is extremely complicated by multiple fold systems and numerous faults of varying magnitudes. The major portion of the unit is located within the Klamath Mountains Province. The near coastal reaches of the unit are located in rocks of the northern Coast Range. These rocks are primarily sandstone, shale, and conglomerate of probable Cretaceous age.



Klamath River Near
Streamwood



Confluence of Klamath
and Scott Rivers

Soils of the unit can be segregated into two groups, recent alluvial soils and upland soils. The recent alluvial soils were formed from material eroded from the watershed through natural geological processes. These materials were transported and redeposited along the banks of the many rivers and streams that transect the area. These soils exhibit little or no development of subsoil layers that would restrict the movement of water or the development of plant roots. Many of these alluvial soils, however, are of such coarse texture that irrigation efficiency would be low and crop yields would be severely reduced. Placer mining in the early days of this area has reduced many of these alluvial soil deposits to jumbled piles of loose water-polished rock and gravel.

The upland soils were formed in place by the weathering and decomposition of the parent rock material upon which they rest. The native vegetation on these soils is largely mixed conifer. Where slope is not excessive the soils are deep, well drained, and generally free from any soil deficiency which would restrict their suitability for agricultural use. Many acres of these upland soils, however, were classified as being better suited to remain under some type of forest management.

Soil bodies suitable for agricultural development in the Klamath River area are generally small, isolated, and irregularly shaped. This presents a formidable obstacle to the development of other than small parcels of irrigated pasture, hay crops, or deciduous orchard.

Climate

The climate of the Klamath River Hydrographic Unit is characterized by dry summers with high daytime temperatures and wet winters with moderate to low temperatures. The average maximum temperature for July, which is generally the hottest month, ranges from approximately 65° F. near the ocean at Klamath to 95° F. in the interior near Happy Camp. The higher elevations of the mountains experience a temperature decrease of about 2° F. per 1,000 feet of elevation. About 85 percent of the precipitation occurs from October to March with occasional showers during the summer months. The mean seasonal precipitation, the mean and extreme temperatures, and the average frost-free period of representative stations in or near the unit are shown in Table 2. Values of precipitation are based on or corrected to the period 1905-06 to 1954-55. For purposes of this report the frost-free period is defined as the average period in days between the last spring occurrence and the first fall occurrence of a 32° F. temperature for the period of record.

Water Resources

Surface water flows on the Klamath River are regulated in the Upper Klamath Basin under the Klamath River Basin Compact, ratified by the States of California and Oregon on April 17, 1957. (See Water Code Sections 5900-5901.) These flows as measured at the USGS gaging station "Klamath River at Keno, Oregon" are, for all practical purposes, the impaired runoff flowing into California from the Upper Klamath River Basin. Information obtained from representative gaging stations throughout the hydrographic unit is summarized in Table 3.

TABLE 2

CLIMATOLOGICAL DATA AT SELECTED STATIONS
IN OR NEAR KLAMATH RIVER HYDROGRAPHIC UNIT

Station	Elevation : (in feet)	Mean seasonal : precipitation : (in inches)	Mean : temperatures : Minimum:Maximum : (in degrees F.)	Extreme : temperatures : Minimum:Maximum : (in degrees F.)	Average : frost-free : period : (in days)
Cecilville-Sawyer	3,000	36.76	35.5 67.2	2 108	118
Copco Dam No. 1	2,700	16.29	---	---	---
Fort Jones	2,720	20.16	33.9 66.5	-23 110	108
Happy Camp R. S.	1,088	50.44	40.4 71.5	6 115	186
Hilts	2,915	20.20	---	---	---
Klamath	25	77.04	44.8 61.0	24 90	259
Klamath Falls, Ore.	4,090	13.09	36.4 60.7	-24 105	125
Oak Knoll R. S.	1,963	21.50	---	---	---
Orleans	403	47.84	42.3 71.3	14 113	204
Sawyers Bar R. S.	2,169	42.44	---	---	---
Yreka	2,631	17.32	36.7 67.2	-11 112	138

TABLE 3
RECORDED RUNOFF AT SELECTED STATIONS
IN OR NEAR KLAMATH RIVER HYDROGRAPHIC UNIT

	Klamath River at Keno	Klamath River below Fall Creek	Shasta River near Yreka	Scott River near Fort Jones	Klamath River near Seiad Valley	Klamath River at Sames Bar	Salmon River at Sames Bar	Trinity River near Hoopa	Klamath River near Klamath
Period of Record	1904 - 1913 1929 - 1958	1923 - 1958	1933 - 1941 1945 - 1958	1941 - 1958	1912 - 1925 1931 - 1958	1927 - 1958	1911 - 1915 1927 - 1958	1911 - 1914 1916 - 1918 1931 - 1958	1910 - 1926 1950 - 1958
Annual Discharge									
Minimum	395,000 1931	550,000 1931	56,500 1933-34	160,800 1944	1,460,000 1920	2,240,000 1931	473,000 1931	1,900,000 1934	3,740,000 1924
Acre-feet Year									
Maximum	2,600,000 1956	2,905,000 1956	254,900 1958	944,300 1958	5,397,000 1956	11,170,000 1956	2,253,000 1958	8,886,000 1958	24,150,000 1958
Acre-feet Year									
Average	1,247,000	1,320,000	130,300	488,700	3,103,000	5,657,000	1,249,000	4,228,000	13,100,000
Acre-feet									
1958 Discharge									
Acre-feet	2,375,000 194	2,679,000 203	254,900 196	944,300 193	5,122,000 165	10,750,000 190	2,253,000 180	8,886,000 210	24,150,000 184
Percent of average									
Summer Discharge (April - September)									
Minimum	61,700 1931	141,000 1931	11,148 1934	90,800 1955	329,150 1955	738,700 1931	192,730 1934	621,300 1934	1,114,000 1924
Acre-feet Year									
Maximum	1,173,140 1956	1,317,700 1956	99,050 1941	413,990 1952	2,237,100 1956	4,386,500 1938	1,039,900 1938	2,868,680 1938	7,444,100 1958
Acre-feet Year									
Monthly Discharge									
Minimum	5,810 June 1931	19,000 June 1931	513 Aug. 1939	1,910 Sept. 1955	51,000 Aug. 1918	33,800 Aug. 1931	4,940 Aug. 1931	12,700 Sept. 1934	96,400 Aug. 1918
Acre-feet Month and year									
Maximum	421,000 June 1904	439,900 Mar. 1958	55,670 Feb. 1958	266,200 Feb. 1958	998,700 Feb. 1958	2,536,000 Feb. 1958	621,300 Feb. 1958	2,798,000 Feb. 1958	6,841,000 Feb. 1958
Acre-feet Month and year									
Instantaneous Discharge									
Minimum	26 Sept. 23, 1956	10 1925 - 26	3.4 Aug. 13, 1938	20 Sept. 14, 1955	320 Nov. 1917	350 Aug. 25, 1931	70 Aug. 25, 1931	162 Oct. 4, 1931	1,340 July 31, 1924
Cubic feet per second Date									
Maximum	7,420 Mar. 3, 1958	12,000 Dec. 21, 1955	6,090 Dec. 22, 1955	38,500 Dec. 22, 1955	122,000 Dec. 22, 1955	202,000 Dec. 22, 1955	84,000 Dec. 22, 1955	190,000 Dec. 22, 1955	425,000 Dec. 22, 1955
Cubic feet per second Date									



Left:
Town of Klamath
August 1962



Below:
Town of Klamath
December 1955

CHAPTER II. WATER USE

Water requirements in the Klamath River Hydrographic Unit are met almost entirely by diversion of surface runoff, however, a limited portion is supplied by ground water. A survey of facilities established for diversion of streamflow was made for this investigation. The results of the survey include diversion locations, descriptions of the facilities, uses, amounts of water diverted, and information on apparent water rights relating to diversions. Diversions of water for all purposes are reported, with the exception of those which involve less than approximately 10 acre-feet per season, such as individual domestic users.

Quantities of water diverted during 1958 were measured in order to further describe the diversion systems. The measured quantities do not necessarily represent average diversions, since in any single year the quantity diverted will be influenced by precipitation during the growing season and the available streamflow. As was shown in Table 3, 1958 was an unusually wet year in the Klamath River Hydrographic Unit. Considerations other than available water supply, such as economic factors, may also affect the relation of any diversion record to typical operating conditions. No attempt was made to assess these factors in this report. Generally, the diversion quantities reported are the actual amounts of water taken from the respective sources, and therefore include the recoverable and irrecoverable losses incidental to the primary use.

The location of water wells and the measurement of their production was not covered in this investigation. However, the areas of

lands irrigated by water from all sources, including underground sources, were determined in the land use survey described in Chapter III.

Community water service in the unit is provided in the following locations:

<u>Location</u>	<u>Owner</u>	<u>Source</u>
Hamburg	Community of Hamburg	Mill Creek
Happy Camp	Happy Camp Improvement, Inc.	Elk Creek
Hilt	Fruit Growers Supply Co.	Hunts Creek
Hornbrook	Hornbrook Water Co.	Rancheria Creek
Orleans	Orleans Veneer and Lumber Co.	Sims Gulch
Sawyers Bar	Community of Sawyers Bar	N. Fork Salmon River
Scott Bar	Scott Bar Community Water Association	Bill Berry Gulch

Rural domestic uses are supplied by individual domestic wells or diversion of surface waters.

Water Rights

Water rights are an important consideration in the determination of availability of waters which are surplus to the present and future needs of an area wherein the waters originate. Data were therefore obtained with respect to apparent water rights in connection with surface water diversions. These rights may be based on appropriative or riparian status and may have been defined by adjudication.

Water rights in Seiad Valley were adjudicated in 1949. The Seiad Creek Adjudication and the California law of water rights are described briefly in Appendix C.

Most of the water use in the unit is based on riparian rights or on appropriative rights established prior to 1914. As of June 30, 1960, a total of 247 currently active applications had been made in the unit under provisions of the Water Commission Act of 1914. Permits or licenses had been granted for 234 of these applications and 13 were incomplete. All the applications are tabulated in Table C-1, Appendix C, page C-12.

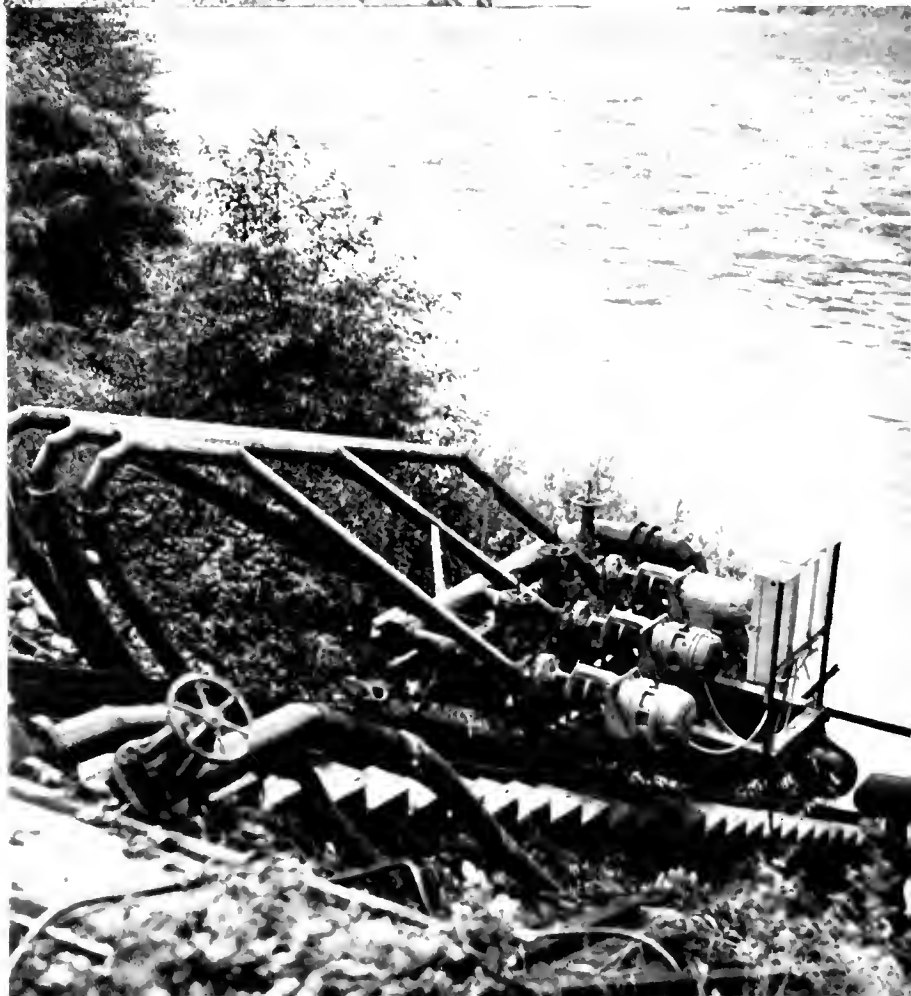
Surface Water Diversions

During the survey an attempt was made to locate and obtain data with respect to all diversions of more than 10 acre-feet per year. The locations of these diversions were plotted on aerial photographs having a scale of about 1:20,000. All diversions in use in 1958, as well as those which had been used within the preceding five years, were included. The date of last use of discontinued diversions was recorded, if known. Direct diversions, as well as those involving significant surface storage were located. All reservoirs which had surface areas of about three acres or more were mapped. Three acres was considered the minimum size which could be delineated on the aerial photographs used. Reservoirs located along and operated in conjunction with canals and ditches are shown on the land and water use maps, but are not considered as separate systems and are not assigned location numbers. Similarly, supplies obtained from small intermittent streams intercepted by canal systems are not classed as separate diversions.



Gravity Diversion From
Beaver Creek

Pumping Installation,
Klamath River, Orleans
Veneer and Lumber Co.



In some situations water users have made efficient use of water supply by rediverting field runoff or spill collected from their own upstream diversion systems. In this investigation, such points of rediversion are neither located on the maps nor assigned numbers. However, if return flow from another water user's operation is rediverted, or if there is doubt as to the origin of the water, the diversion is delineated and assigned a number. Diversion systems of water companies or groups of water users are considered as single units and individual customer distribution points are not shown on the maps.

There were 279 surface water diversions located in the unit in 1958. These diversions are classified by primary use as follows:

<u>Primary use</u>	<u>Number of diversions</u>
Irrigation	217
Municipal	4
Industrial (lumber mills)	10
Mining	17
Power	19
Domestic	<u>12</u>
Total diversions located	279

Points of diversion and main canals or pipelines used to convey the water are delineated on the 36 sheets of Plate 2 entitled "Land and Water Use." The diversions are listed in Table 4.

Numbering System for Surface Water Diversions

Surface water diversions are numbered to indicate their location by township, range, and section within the federal land survey system.

In this report each section is subdivided into 40-acre plots, and the diversions are numbered within each of these 40-acre plots according to the order in which they were located. For example, diversion 17N/7E-34F1, which is shown on sheet 8 of Plate 2 as "34F1," is the first diversion located in the SE 1/4 of the NW 1/4 of Section 34 in Township 17 North, Range 7 East, Humboldt Base and Meridian (HB&M).

Descriptions of Surface Water Diversions

Description, history, and other information relating to surface water diversions were obtained by field inspection, by interview with water users or their representatives, and by reference to prior reports and official records. This information is contained in Table 4. Data in the table are arranged by diversion number within each subunit. Location of subunit boundaries is shown on Plate 1.

The purpose of each diversion, the quantity of water diverted during 1958, the extent of use such as the number of acres irrigated, and the method of application of water are included in Table 4. If the purpose listed is not the usual use for that diversion, notation is made in the remarks. The extent of domestic use is specified only when five or more connections are served. Stockwatering of less than 10 head of livestock is considered to be a domestic use. The extent of irrigation is based on the land use survey described in Chapter III.

The type of water right under which the respective diversions are considered to be made is indicated in Table 4 as the "apparent water right." The determination of this item is based upon the best information obtained from the owner, from the files of the State Water Rights Board, from official records, and from other sources.

The amount of the right, if established and known, and a reference to the source of data are also included. Although this information is believed to be accurate, it is emphasized that it is not based on sworn claims or testimony and should in no way be construed to represent a conclusive determination of water rights. In this report, references to the "miner's inch" are quoted from the water rights filings made prior to 1914. Since some of these filings specify the pressure of measurement and some do not, no standard rate of flow can be said to apply.

Diversions for which water rights have been adjudicated are listed in Table 4 as "adjudicated". Those based on appropriate rights are listed as "appropriative". Those which have been neither adjudicated nor based on appropriations, but for which the area of use is apparently riparian to the streams or which the owner claims to be riparian are listed as "riparian". The areas of use for many of the diversions listed as adjudicated or appropriative are probably riparian to water sources, but no attempt was made in this investigation to make such determinations.

In the case of an adjudicated right, the amount of the decreed right is tabulated. For an appropriative right the amount tabulated is that found in the filing, in the application, or in the latest permit or license which may have been issued. The reference given for an appropriation initiated after the effective date of the Water Commission Act (1914) is the number of the application on file with the State Water Rights Board. For appropriations prior to 1914, the reference, if known, is the book and page number of the official county record in which the filing is recorded. Such filings were made in accordance with Sections 1410 and 1422 of the Civil Code as enacted in 1872, which preserved the

priority of a diligent appropriator from the time of filing and enabled him to prevail over a concurrent nonstatutory appropriator.

A detailed description of the diversion systems, including dams, pumps, and main conduits, as well as any special features, is presented in Table 4. The diversions are also classified as gravity, pump, and storage according to the following descriptions:

Gravity diversion - A system in which water is taken from its natural course at a diversion structure and conveyed by gravity through a canal or pipeline to the area of use. Such a diversion may have a reservoir on the stream but the capacity is small compared with the amount of water diverted and provides no significant carry-over storage from winter to summer.

Pump diversion - A system in which water is pumped from its natural course through a pipeline to the area of use or to a gravity conduit located at a higher elevation.

Storage diversion - A system consisting of or including a surface reservoir having significant carry-over storage within each season or from season to season.

Systems not exclusively of one of these basic types are listed as combinations of those types which best describe them.

The remarks specify such information as the names of former owners, changes of ownership since 1958, and further details explaining entries in the previous columns.

TABLE 4

DESCRIPTIONS OF SURFACE WATER DIVERSIONS IN
KLAMATH RIVER HYDROGRAPHIC UNIT

Location number and/or sheet number	Division name and/or owner	Source	Water use in 1957			Apparent water right			Indicated date of appropriation or first use	Description of diversion system	Remarks
			Purpose	Extent and method of use	Amount diverted in acre-feet	Type	Amount	Reference			
APLEGATE RIVER SUBUNIT (No diversions located in this subunit)											
BEAVER CREEK SUBUNIT											
N D B & N 45N/84-111 (g)	Charles Coolie	Humbug Creek	Mining Domestic	Placer (a)	100	Riparian	--	--	1955	Gravity; rock and log dam with 0.1 mile of earth ditch.	Former owners: Tom Kelly, Franklin, Pherry.
45N/84-1081 (Sheet 14)	L. B. Jacobson	Middle Fork Humbug Creek	Indust. Domestic Mining	Lumber mill (A) Placer	94	Approp.	1 cfs	A-8364 ^b	1934	Gravity; earth and rock dam 1 foot high, 5 feet long with 0.5 miles of earth ditch.	Former owners: Colson, Thrash, Johnston.
46N/74-241 (Sheet 10)	Thomas N. Clyburn	Ash Creek	Mining	Placer	299	Approp.	3 cfs	A-11832 ^b	1883	Gravity; rock dam with 0.6 mile of earth ditch and flume.	Former owner: Nigger Boy Mine.
46N/74-2101 (Sheet 10)	T. C. Woods	Clear Creek	Irrig. Stock. Domestic	2 acres by flooding [*] 58 head (a)	10	Approp.	--	--	Prior 1914	Gravity; earth and rock dam with 0.6 mile of earth ditch.	Former owner: Rose. Previously irrigated an additional 21 acres.
46N/84-141 (Sheet 10)	Emma Pearl Freshour	Dutch Creek	Irrig.	13 acres by flooding	251	Riparian	--	--	1887	Gravity; 0.5 mile of earth ditch.	Former owner: Joseph Freshour.
46N/84-171 (Sheet 10)	Richard Freshour W. W. Rogers	Dutch Creek	Irrig.	12 acres by flooding	289	Riparian	--	--	About 1898	Gravity; rock and log dam 1 foot high, 25 feet long with 1.0 mile of earth ditch.	Former owners: Jim Ladd, Martin Knightwind, George Seiford, Joe Clyburn.
46N/84-241 (Sheet 10)	Joe Freshour	Lumgray Creek	Irrig.	(*)	672	Approp.	--	--	About 1850	Gravity; rock and log dam 1 foot high, 6 feet long with 0.3 mile of earth ditch.	Amount diverted irrigated 26 acres jointly with 47N/84-351. Previously irrigated an additional 2 acres.
46N/94-341 (Sheet 10)	W. W. Rogers	Doggett Creek	Irrig.	39 acres by flooding [*]	364	(c)	--	--	1915	Gravity; 0.9 mile of earth ditch.	Former owners: Lew Doggett, Culver. Area is normally irrigated jointly with 46N/94-342.
46N/94-341 (Sheet 10)	Richard Jones Mason Meek Richard Pack	Doggett Creek	Irrig.	89 acres by flooding	850	Approp.	--	--	About 1875	Gravity; rock dam with 2.4 miles of earth ditch.	Former owners: Quigley, Western Sheep Company.
46N/94-342 (Sheet 10)	W. W. Rogers	Doggett Creek	Irrig. [*]	(*)	None	(c)	--	--	About 1850	Gravity; 0.2 mile of earth ditch.	Previously irrigated 39 acres jointly with 46N/94-341.

* See remarks.

-- Information not available.
For lettered footnotes, see last page of table.

TABLE 4 (Continued)
DESCRIPTIONS OF SURFACE WATER DIVERSIONS IN
KLAMATH RIVER HYDROGRAPHIC UNIT

Location number and/or Plate 2, sheet number	Diversion name and/or owner	Source	Water use in 1958			Amount diverted in acre-feet	Apparent water right		Indicated date of appropriation or first use	Description of diversion system	Remarks
			Purpose	Extent and method of use	Type		Amount	Reference			
BEAVER CREEK SUBUNIT (Continued)											
H. D. B. & M. 46N/9W-721 (Sheet 10)	St. Francis Investment Co.	Klamath River	Irrig.	7 acres by sprinkler	27	Alparian	--	--	1955	Pump; 7.5 hp. motor with 0.2 mile of 3-inch pipe.	
46N/9W-1021 (Sheet 10)	Richard Jones Mason Meek Richard Pack	Doggett Creek	Irrig.	4.9 acres by sprinkler and flooding	272	Approp.	--	--	About 1875	Gravity; rock dam with 0.3 mile of earth ditch.	Former owners: Winkley, Western Sheep Company, Lichens
46N/9W-1022 (Sheet 10)	W. A. Rogers	Doggett Creek	Irrig.	10 acres by flooding	112	(c)	--	--	About 1850	Gravity; 0.2 mile of earth ditch.	
46N/9W-1021 (Sheet 10)	Carl W. Schredler	Klamath River	Irrig.	10 acres by sprinkler	10	Alparian	--	--	Prior 1958	Pump; diesel engine with 640 feet of 4-inch pipe.	Former owners: Henry J. and Minnie K. Barton, J. A. and Gary E. Wiborn, Garlinghouse.
46N/9W-1301 (Sheet 10)	Circle Two Ranch Arthur A., Ida M., Mable M., and Merle R. Hegler	Barkhouse Creek	Irrig.	2 acres by flooding	606*	Approp.	--	--	Prior 1906	Gravity; rock dam 2.5 feet high, 12 feet long with 0.6 mile of earth ditch.	Former owners: Walker, Tom McGawley, Tom Hegler. Amount diverted irrigated an additional 46 acres jointly with 47N/3W-31F1.
46N/9W-1301 (Sheet 10)	Circle Two Ranch Arthur A., Ida M., Mable M., and Merle R. Hegler	Barkhouse Creek	Irrig.	8 acres by flooding	100	Alparian	--	--	About 1850	Gravity; rock dam with 0.5 mile of earth ditch.	Former owners: Charles Humphrey, Lichens. Henry Barton, Edward Howard, Lang.
46N/9W-1302 (Sheet 10)	Circle Two Ranch Arthur A., Ida M., Mabel M., and Merle R. Hegler	Barkhouse Creek	Irrig.	(s)	1,670*	Alparian	--	--	Prior 1958	Gravity; rock and log dam with 0.2 mile of earth ditch.	Former owners: Charles Humphrey, Lichens. Henry Barton, Edward Howard, Lang. Amount diverted irrigated 7 acres jointly with 46N/9W-24D1.
46N/9W-1601 (Sheet 10)	Bert C. Jackson	McKinney Creek	Irrig.	21 acres by flooding and sprinkler	818	Alparian	--	--	About 1850	Gravity; earth and rock dam with 0.9 mile of earth ditch.	Former owners: Andrew Jackson, Frank A. Jackson, Blanche B. Jackson.
46N/9W-2311 (Sheet 10)	Elmer and Frank Lang	Little Barkhouse Creek	Irrig.	9 acres by flooding*	220	Alparian	--	--	1911	Gravity; rock and timber dam with 0.2 mile of earth ditch.	Previously irrigated an additional 4 acres.
46N/9W-24D1 (Sheet 10)	Circle Two Ranch Arthur A., Ida M., Mable M., and Merle R. Hegler	Barkhouse Creek	Irrig.	4 acres by flooding*	70*	Alparian	--	--	Prior 1900	Gravity; 0.6 mile of earth ditch.	Former owners: Howe Brothers, Harold Lang. Amount diverted irrigated an additional 7 acres jointly with 46N/9W-13N2.
46N/9W-24E1 (Sheet 10)	Circle Two Ranch Arthur A., Ida M., Mable M., and Merle R. Hegler	Barkhouse Creek	Irrig.	5 acres by flooding	110	Alparian	--	--	1860	Gravity; rock dam with 0.3 mile of earth ditch.	Former owners: Howe Brothers, Harold Lang.

* See remarks.
-- Information not available.
For lectured footnotes, see last page of table.

TABLE 4 (Continued)
DESCRIPTIONS OF SURFACE WATER DIVERSIONS IN
KLAMATH RIVER HYDROGRAPHIC UNIT

Location number and/or Plate 2 sheet number	Diversion name and/or owner	Source	Water use in 1958		Amount diverted in acre-feet	Apparent water right		Indicated date of appropriation or first use	Description of diversion system	Remarks
			Purpose	Extent and method of use		Type	Amount			
BEAVER CREEK SUBUNIT (Continued)										
M. D. B. & M. 46N/94-2432 (Sheet 10)	Circle Two Ranch Arthur A., Ida M., Mable M., and Merle R. Hegler	Barkhouse Creek	Irrig.	4 acres by flooding	110	Riparian	--	1958	Gravity; 0.2 mile of earth ditch.	
46N/94-2431 (Sheet 10)	Circle Two Ranch Arthur A., Ida M., Mable M., and Merle R. Hegler	Grouse Creek	Irrig.	4 acres by flooding	30	Riparian	--	About 1880	Gravity; rock dam with 0.2 mile of earth ditch.	Former owners: Howe Brothers, Harold Lang.
46N/94-2432 (Sheet 10)	Circle Two Ranch Arthur A., Ida M., Mable M., and Merle R. Hegler	Grouse Creek	Irrig.	3 acres by flooding	20	Riparian	--	About 1880	Gravity; rock dam with 0.2 mile of earth ditch.	Former owners: Eli Miller, Harold Lang, Larssen, Martin Lang, Edward H. Lang.
46N/94-2431 (Sheet 10)	Circle Two Ranch Arthur A., Ida M., Mable M., and Merle R. Hegler	Grouse Creek	Irrig.	8 acres by flooding	99	Riparian	--	Prior 1900	Gravity; rock dam with 0.2 mile of earth ditch.	Former owners: Howe Brothers, Harold Lang.
46N/94-2431 (Sheet 10)	Circle Two Ranch Arthur A., Ida M., Mable M., and Merle R. Hegler	Grouse Creek	Irrig.	12 acres by flooding	90	Riparian	--	About 1880	Gravity; rock dam with 0.2 mile of earth ditch.	Former owners: Howe Brothers, Harold Lang.
46N/94-25A1 (Sheet 10)	Circle Two Ranch Arthur A., Ida M., Mable M., and Merle R. Hegler	Grouse Creek	Irrig.	7 acres by flooding	30	Riparian	--	About 1895	Gravity; 0.7 mile of earth ditch.	Former owners: Howe Brothers
46N/94-26B1 (Sheet 10)	Elmer and Frank Lang	Barkhouse Creek	Irrig.	6 acres by flooding	272	Riparian	--	Prior 1958	Gravity; rock dam with 0.4 mile of earth ditch.	
46N/94-26K1 (Sheet 10)	Elmer and Frank Lang	Barkhouse Creek	Irrig.	11 acres by flooding	106	Riparian	--	About 1850	Gravity; rock and timber dam with 0.9 mile of earth ditch.	Former owners: Flanagan, Nelse Lang.
46N/94-29B1 (Sheet 10)	Kenneth H. Duncan	McKinney Creek	Domestic Mining*	(a) (a)	132	Riparian	--	1864	Gravity; rock dam with 0.2 mile of earth ditch.	Previously supplied a placer mine.
46N/94-28N1 (Sheet 10)	Virgil Roberts	McKinney Creek	Irrig.*	(*)	None	Riparian	--	1864	Gravity; rock dam with 0.2 mile of earth ditch.	Former owner: Fred Jensen. Previously irrigated 6 acres. Area was dry-farmed in 1958.

* See remarks.
-- Information not available.
For lettered footnotes, see last page of table.

TABLE 4 (Continued)
DESCRIPTORS OF SURFACE WATER DIVERSIONS IN
KLAMATH RIVER HYDROGRAPHIC UNIT

Location number and/or Plate 2 sheet number	Diversion name and/or owner	Source	Water use in 1958			Apparent water right		Indicated date of approval or first use	Description of diversion system	Remarks	
			Purpose	Extent and method of use	Amount diverted in acre-feet	Type	Amount				Reference
BEAVER CREEK SUBUNIT (Continued)											
N D B & M 46N/9W-33E1 (Sheet 10)	Virgil Roberts	West Fork McKinney Creek	Irrig.*	(*)	None	Approp.	--	1864	Gravity; 0.4 mile of earth ditch.	Former owner: Fred Jensen. Previously supplemented 46N/9W-33E1.	
46N/9W-33F1 (Sheet 10)	Virgil Roberts	McKinney Creek	Irrig.	23 acres by flooding*	233	Approp.	--	1864	Gravity; 1.1 miles of earth ditch.	Former owner: Fred Jensen. Previously received supplemental supply from 46N/9W-33E1.	
46N/10W-23G1 (Sheet 9)	Leroy Bagley*	Collins Creek	Irrig. Domestic	4 acres by sprinkler (a)	Not meas.	Approp.	--	About 1886	Gravity; earth and rock dam with 0.3 mile of earth ditch and pipe.	Former owner: Dave Collins. Ownership changed to W. L. Holstein in 1959.	
47N/7W-31B1 (Sheet 6)	R. Jennings	Dutch Creek	Irrig.	5 acres by flooding	Not meas.	Approp.	--	Prior 1900	Gravity; earth and rock dam with 0.2 mile of earth ditch.	Former owners: Western Sheep Company, Mrs. Walter Freshour.	
47N/7W-31E1 (Sheet 6)	H. Jennings	Dutch Creek	Irrig.	6 acres by flooding*	Not meas.	Approp.	--	Prior 1900	Gravity; earth and rock dam with 0.6 mile of earth ditch.	Former owners: Western Sheep Company, Mrs. Walter Freshour. Previously irrigated an additional 9 acres.	
47N/8W-19H1 (Sheet 6)	William W. Mullin	Beaver Creek	Irrig. Mining Domestic	3 acres by flooding Placer (a)	Not meas.	Riparian	--	1900	Gravity; rock and timber dam 1 foot high, 15 feet long with 0.5 mile of earth ditch.	Former owners: Henry Barton, George Knight, Rufus Culp.	
47N/8W-30F1 (Sheet 6)	Walter B. Stockett	Buckhorn Gulch	Irrig.	7 acres by flooding	Not meas.	(c)	--	1957	Gravity; earth and rock dam with 4.2 miles of earth ditch.		
47N/8W-31F1 (Sheet 6)	Quigley-Lichens Ditch	Beaver Creek	Irrig. Domestic	54 acres by flooding and sprinkler* 18 connections	3,307* (38)	Approp.	9.58 cfs 1.0 cfs	A-2226bs A-7282bs	1890	Gravity; concrete dam 60 feet long with 5.4 miles of ditch.	Former owner: Tom Quigley. Previously irrigated an additional 1 acre. Amount diverted irrigated an additional 46 acres jointly with 46N/9W-13M1. Amount in parentheses is a 1959 measurement. A-2226s filed in name of L. L. and W. W. Lichens, W. W. Quigley, G. L. Edith, Alice, and C. O. Smith, A. R. Hegler. A-7282s filed in name of Walter and Nellie Shumlin.
47N/8W-32H1 (Sheet 6)	Jesse R. DeAville	Miller Gulch	Irrig. Domestic	3 acres by sprinkler* (a)	Not meas.	Riparian	--	1952	Gravity; earth and rock dam with 0.2 mile of 2-inch pipe.	Previously irrigated an additional 6 acres.	
47N/8W-35K1 (Sheet 6)	Joe Freshour	Lungrey Creek	Irrig. Stock.	50 head (*)	804*	Approp.	--	1891	Gravity; rock dam with 1.5 miles of earth ditch.	Amount diverted irrigated 26 acres jointly with 46N/8W-2H1.	

* See remarks.
— Information not available.
For lettered footnotes, see last page of table.

TABLE 4 (Continued)
DESCRIPTORS OF SURFACE WATER DIVERSIONS IN
KLAMATH RIVER HYDROGRAPHIC UNIT

Location number and/or Plate 2 sheet number	Diversion name and/or owner	Source	Water use in 1958		Amount diverted in acre-feet	Apparent water right		Indicated date of appropriation or first use	Description of diversion system	Remarks	
			Purpose	Extent and method of use		Type	Amount				Reference
BEAVER CREEK SUBUNIT (Continued)											
H. D. B. & M. 47N/94-24H1 (Sheet 6)	Jesse R. DeAvilla Letha and Art Stanley	Beaver Creek	Irrig.*	(*)	None	Approp.	2.46 cfs 1.09 cfs	A-1134 ^b A-4213 ^b	1921	Gravity; rock and log dam with 1.3 miles of earth ditch.	Former owners: Antone DeVilla, Paul Dennis. Previously irrigated 28 acres.
CECILVILLE SUBUNIT											
H. D. B. & M. 10W/84-31G1 (Sheet 30)	Winnie Garner Ted H. Finn Julia Linderman	Knownothing Creek	Domestic Power	9 connections 12 kw	3,687	Alparian	--	--	1938	Gravity; earth and log dam 6 feet high, 40 feet long with 2.2 miles of earth ditch and wood flume.	Former owner: Eyrd Linderman. Generating capacity of 4 powerplants on same system.
H. D. B. & M. 37N/10W-44N1 (Sheet 36)	William S. Johnson	Big Bend Creek	Irrig. Stock.	17 acres by flooding --	160	Alparian	--	--	About 1870	Gravity; rock dam 2 feet high, 10 feet long with 0.7 mile of earth ditch.	Former owner: Albert Peluca.
37N/10W-5D1 (Sheet 36)	Jordan Ditch E. W. Sawyer	Rush Creek	Irrig. Domestic Stock. Power	(*) (a) 20 head 3 kw	1,791*	Approp.	0.55 cfs	A-9078 ^b	Prior 1900	Gravity; earth and rock dam with 1.0 mile of earth ditch.	Former owners: Jordan, Heintz, Louis J. Hoff. Amount diverted irrigated 63 acres jointly with 38N/10W-32H1.
37N/11W-3N1 (Sheet 36)	Dennis Moody	Black Gulch	Irrig. Mining	6 acres by flooding Placer	67* (655)	Approp.	--	--	Prior 1900	Gravity; log dam 5 feet high, 30 feet long with 0.3 mile of earth ditch.	Former owners: Summerville Mining Co., Walter Gillis, Lake. Received supplemental supply from 37N/11W-9A1. Amount in parentheses is a 1959 measurement.
37N/11W-9A1 (Sheet 36)	Dennis Moody	Black Gulch	Irrig. Mining	(*) (*)	12*	Approp.	--	--	Prior 1900	Gravity; 0.8 mile of earth ditch.	Former owners: Summerville Mining Co., Lake. Amount diverted supplemented 37N/11W-3N1.
37N/11W-12N1 (Sheet 36)	Edward A. McBroom	South Fork Salmon River	Mining Domestic	Placer (a)	5,050	Approp.	--	--	Prior 1900	Gravity; log dam 2 feet high, 60 feet long with 3.7 miles of earth ditch and 22-inch pipe.	Former owners: George Spooner, Fred Smith, Alexander Parkin, A. B. Farnsworth and Company.
37N/11W-13N1 (Sheet 36)	E. W. Sawyer	Blind Horse Creek	Power	10 kw	1,412*	Approp.	1.1 cfs	A-11032 ^b	Prior 1900	Gravity; earth and log dam with 0.8 mile of earth ditch and wood flume.	Former owners: Steele Homestead, Barton. Amount diverted includes all water from 37N/11W-23G1.

* See remarks.
-- Information not available.
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TABLE 4 (Continued)
DESCRIPTIONS OF SURFACE WATER DIVERSIONS IN
KLAMATH RIVER HYDROGRAPHIC UNIT

Location number and/or plate 2 sheet number	Diversion name and/or owner	Source	Water use in 1938			Apparent water right			Indicated date of operation or first use	Description of diversion system	Remarks
			Purpose	Extent and method of use	Amount diverted in acre-feet	Type	Amount	Reference			
CECILVILLE SUBUNIT (Continued)											
H. D. B. & M. 37N/11W-2301 (Sheet 36)	E. W. Sawyer	China Creek	Power	(*)	(*)	(c)	--	--	Prior 1900	Gravity; earth and log dam with 1.0 mile of earth ditch and natural channel.	Former owners: Steele Homestead, Barton. Amount diverted and extent of use reported under 37N/11W-1341.
38N/10W-32H1 (Sheet 34)	Quass Ditch John W. Quass	Wash Creek	Irrig. Stock.	(*) 20 head	310	Approp.	--	--	Prior 1900	Gravity; log dam 5 feet high, 30 feet long with 3.5 miles of earth ditch.	Former owner: Lou Hill Mining Company. Amount diverted irrigated 63 acres jointly with 37N/10W-5D1.
38N/11W-17L1 (Sheet 34)	United States Klamath National Forest	Crawford Creek	Irrig. Domestic	4 acres by flooding 20 persons	269	Approp.	--	--	Prior 1935	Gravity; rock dam 6 feet high, 10 feet long with 0.5 mile of wood flume and earth ditch.	
38N/11W-21A1 (Sheet 34)	Nestor A. Westover	East Fork of South Fork of Salmon River	Power	1 kw	2,661	Approp.	--	--	Prior 1900	Gravity; rock dam with 0.9 mile of earth ditch.	Former owners: Matthews, Francis George.
38N/11W-29D1 (Sheet 34)	Shasta Mining Company	Crawford Creek	Irrig. Stock.	7 acres by flooding 18 head	327	(c)	--	--	Prior 1914	Gravity; log dam 3 feet high, 20 feet long with 0.6 mile of earth ditch.	Former owner: John McBroom.
38N/11W-29Q1 (Sheet 34)	Olyn W. Gould	Cecil Creek	Power Domestic	0.5 kw (a)	196	Approp.	0.3 cfs	A-14941 ^b	1952	Gravity; rock dam with 0.3 mile of 4-inch pipe and flume.	
38N/11W-30H1 (Sheet 34)	Mrs. John N. McBroom	Crawford Creek	Irrig.	5 acres by flooding	877	Approp.	--	--	Prior 1900	Gravity; log dam with 0.5 mile of earth ditch.	Former owners: Slightman.
38N/11W-30Q1 (Sheet 34)	Jack Boaz Clarence H. Hance	Timber Gulch	Mining Domestic	Placer (a)	147	Approp.	2.0 cfs	A-11654 ^b	1936	Gravity; rock dam with 0.3 mile of earth ditch.	Former owners: Alphonso Pelant, Clarence S. Hurry.
39N/10W-15B1 (Sheet 31)	Glen Thornton	Six Mile Creek	Mining	Placer	967	Approp.	--	--	About 1900	Gravity; wood box with 0.4 mile of 11-inch and 10-inch pipe.	Former owners: Charlie Johnson, Ella Mathews.
39N/10W-31D1 (Sheet 31)	Katherine C. George	East Fork of South Fork of Salmon River	Irrig. Mining Domestic	27 acres by flooding Placer (a)	1,991	Approp.	--	--	Prior 1900	Gravity; log dam 4 feet high, 20 feet long with 2.7 miles of wood flume and earth ditch.	Former owners: Thomas Henry George, George Brown, Clarence and Francis George.

* See remarks.
-- Information not available.
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TABLE 4 (Continued)
DESCRIPTIONS OF SURFACE WATER DIVERSIONS IN
KLAMATH RIVER HYDROGRAPHIC UNIT

Location number and/or sheet number	Diversion name and/or owner	Source	Water use in 1958		Amount diverted in acre-feet	Apparent water right		Indicated date of appropriation or first use	Description of diversion system	Remarks
			Purpose	Extent and method of use		Type	Amount			
CECILVILLE SUBUNIT (Continued)										
M D 8 & M 39N/12W-1781 (Sheet 31)	George R. and Robert G. Godfrey	Negro Creek	Irrig. Stock.	32 acres by sprinkler 30 head	239	Approp.	--	1892	Gravity; earth dam with 200 feet of 7-inch pipe and 1.7 miles of earth ditch to a small reservoir.	
39N/12W-3111 (Sheet 31)	Robert R. Lord	Methodist Creek	Power* Domestic Mining*	(*)	None	Alparian	--	Prior 1900	Gravity; log dam 6 feet high, 4.3 feet long with 0.9 miles of earth ditch.	Former owners: Orcutt, Doombs. Used for power, domestic, and mining purposes until 1955 when system was washed out by flood. System rebuilt in 1959.
COPCO LAKE SUBUNIT										
47N/4W-1C1 (Sheet 7)	F. L. and C. G. Lathrop	Tributary to Copco Lake	Irrig.	15 acres by flooding	Not meas.	(c)	--	Prior 1958	--	
47N/4W-2C1 (Sheet 7)	F. L. and C. G. Lathrop	Snackenburg Creek	Irrig.	22 acres by flooding*	Not meas.	(c)	--	Prior 1958	--	Area irrigated received supplemental supply from 48N/4W-34J1.
47N/4W-3W1 (Sheet 7)	E. G. Lemas	Deer Creek	Irrig.	(*)	120*	Alparian	--	1948	Gravity; earth dam with 300 feet of earth ditch.	Amount diverted irrigated 28 acres jointly with 47N/4W-9C1 (Hornbrook Subunit)
48N/3W-14D1 (Sheet 4)	Hessig Ranch	Klamath River	Irrig.	101 acres by flooding	Not meas.	(c)	--	Prior 1958	--	
48N/3W-14D2 (Sheet 4)	Hessig Ranch	Klamath River	Irrig.	65 acres by flooding	Not meas.	(c)	--	Prior 1958	--	
48N/3W-27B1 (Sheet 4)	R. J. Brown	Klamath River	Irrig. Stock.	57 acres by flooding*	Not meas.	Approp.	--	1862	Gravity; concrete dam 6 feet high, 8 feet long with 2.9 miles of earth ditch.	Previously irrigated an additional 9 acres.
48N/3W-34G1 (Sheet 4)	Hessig Ranch	Klamath River	Irrig.	92 acres by flooding	Not meas.	(c)	--	Prior 1958	--	

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TABLE 4 (Continued)
DESCRIPTIONS OF SURFACE WATER DIVERSIONS IN
KLAMATH RIVER HYDROGRAPHIC UNIT

Location number and Plate 2 sheet number	Division name and/or owner	Source	Water use in 1958		Amount diverted in acre-feet	Apparent water right		Indicated date of appropriation or first use	Description of diversion system	Remarks
			Purpose	Extent and method of use		Type	Amount			
COPCO LAKE SUBUNIT (Continued)										
U D B & M 48N/34-35D1 (Sheet 4)	Hessig Ranch	Klamath River	Irrig.	11 acres by flooding	Not meas.	(c)	--	Prior 1958	--	
48N/4W-19D1 (Sheet 4)	California-Oregon Power Company	Fall Creek	Power	2,200 kw.	Not meas.	(c)	--	1906	--	Former owner: Siskiyou Power and Light Company.
48N/4W-21C1 (Sheet 4)	Warren Tormey	West Fork Beaver Creek	Irrig.	7 acres by flooding	64	Riparian	--	Prior 1917	Gravity; rock dam with 0.8 mile of earth ditch.	Former owner: Manuel Cravell.
48N/4W-29N1 (Sheet 4)	California-Oregon Power Company	Klamath River	Power Irrig.	32,000 kw. 49 acres by flooding*	Not meas.	(c)	--	1925	Gravity and storage; concrete dam 37 feet high, 148 feet long with 0.6 mile of pipe, 0.3 mile of tunnel and 0.8 mile of earth ditch.	Of area irrigated, 34 acres are located in Hornbrook Subunit.
48N/4W-29P1 (Sheet 4)	Copco Lake California-Oregon Power Company	Klamath River	Power	27,500 kw.	1,923,118	(c)	--	1922	Gravity and storage; concrete dam 132 feet high, 415 feet long.	
48N/4W-33Q1 (Sheet 4)	J. Pugaalar	Deer Creek	Irrig.	12 acres by flooding*	Not meas.	Approp.	--	Prior 1880	Gravity; small rock and concrete dam with 0.3 mile of earth ditch.	Area irrigated received supplemental supply from 48N/4W-33R1.
48N/4W-33R1 (Sheet 4)	J. Pugaalar	Deer Creek	Irrig.	(*)	Not meas.	Approp.	--	Prior 1880	Gravity; earth and rock dam with 0.2 mile of earth ditch.	Amount diverted supplemented 48N/4W-33Q1.
48N/4W-34J1 (Sheet 4)	F. L. and C. G. Lathrop	Parks Canyon	Irrig.	(*)	Not meas.*	(c)	--	Prior 1958	--	Amount diverted supplemented 47N/4W-201.
48N/4W-35P1 (Sheet 4)	F. L. and C. G. Lathrop	Snackenburg Creek	Irrig.	18 acres by flooding	Not meas.	(c)	--	Prior 1958	--	
48N/4W-36H1 (Sheet 4)	F. L. and C. G. Lathrop	Prairie Creek	Irrig.	48 acres by flooding	Not meas.	(c)	--	Prior 1958	--	

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Information not available.
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TABLE 4 (Continued)
DESCRIPTIONS OF SURFACE WATER DIVERSIONS IN
KLAMATH RIVER HYDROGRAPHIC UNIT

Location number and/or Plate 2 sheet number	Diversion name and/or owner	Source	Water use in 1958			Apparent water right			Indicated date of appropriation or first use	Description of diversion system	Remarks
			Purpose	Extent and method of use	Amount diverted in acre-feet	Type	Amount	Reference			
COPCO LAKE SUBUNIT (Continued)											
M D B & M 48N/4W-36L1 (Sheet 4)	F. L. and C. G. Lathrop	Prairie Creek	Irrig.	28 acres by flooding	Not meas.	(c)	--	--	Prior 1958	--	Former owners: Roberts, Samuel G. Sloan.
48N/5W-25A1 (Sheet 4)	California-Oregon Power Company	Fall Creek	Irrig.	13 acres by flooding	40	(c)	--	--	Prior 1957	Gravity; earth and rock dam with 1.2 miles of earth ditch.	
HAPPY CAMP SUBUNIT											
H B & M 16N/7E-1H1 (Sheet 12)	Earl K. Lee	Cade Creek	Domestic Irrig.	9 connections (*)	Not meas.	Approp.	0.37 cfs	A-3431 ^b	1923	Pump; 3-hp motor with 0.3 mile of 2-inch pipe.	Former owner: Colline. Previously irrigated 3 acres.
16N/7E-1H1 (Sheet 12)	Siskiyou Mills	Klamath River	Indust.	Lumber mill	1,481	(c)	--	--	1956	Pump; 25-hp motor with 0.2 mile of 6-and 8-inch pipe.	Former owners: Fox Valley, Head Lumber Company.
16N/7E-2F1 (Sheet 12)	Keystone Ditch Siskiyou Mills Yreka Veneer	Spring tributary to Klamath River	Indust. Domestic	Lumber mill --	60	(c)	--	--	Prior 1955	Gravity; 1.1 miles of earth ditch.	
16N/8E-17F1 (Sheet 12)	Prentiss C. Hale	Little Norse Creek	Irrig. Stock.	17 acres by flooding 20 head	240	Approp.	--	--	1890	Gravity; sand bag dam with 0.7 mile of earth ditch.	Former owners: George Steiner, Gus Clingwald.
17N/6E-10E1 (8)	Mrs. Marion M. Kniffen	Cole Creek	Mining	Placer	10	Approp.	1.0 cfs	A-7342 ^b	1932	Gravity; earth and log dam with 0.1 mile of earth ditch.	
17N/7E-4C1 (Sheet 8)	David M. Huey	East Fork Indian Creek	Irrig. Domestic Power	8 acres by flooding (a) 8 kw.	1,144	Approp.	3.0 cfs	A-7789 ^b	1932	Gravity; earth and rock dam with 1.1 miles of earth ditch.	Former owner: Henry Fowler.
17N/7E-4F1 (Sheet 8)	Paul G. Beck Charles Hockaday	East Fork Indian Creek	Irrig. Domestic	4 acres by flooding (a)	375	Approp.	0.12 cfs	A-10343 ^b	1941	Gravity; log dam with 0.2 mile of earth ditch.	

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TABLE 4 (Continued)
DESCRIPTIONS OF SURFACE WATER DIVERSIONS IN
KLAMATH RIVER HYDROGRAPHIC UNIT

Location number and/or sheet number	Diversion name and/or owner	Source	Water use in 1958			Apparent water right			Indicated date of appropriation or first use	Description of diversion system	Remarks
			Purpose	Extent and method of use	Amount diverted in acre-feet	Type	Amount	Reference			
HAPPY CAMP SUBUNIT (Continued)											
H. B. & W. 17N/7E-511 (Sheet 8)	Alice Jedros	Indian Creek	Irrig.	6 acres by flooding	111	Approp.	--	--	Prior 1900	Gravity; earth and log dam with 0.5 mile of earth ditch.	Former owner: Outler.
17N/7E-701 (Sheet 8)	Elmer E. McClimans	Spring tributary to Indian Creek	Irrig. Domestic	8 acres by sprinkler (a)	Not meas.	Approp.	0.08 cfs	A-16120 ^b	1924	Gravity; concrete box with 1,000 feet of 2-inch, 1.5-inch and 1-inch pipe.	
17N/7E-981 (Sheet 5)	Alice Jedros	East Fork Indian Creek	Irrig. Domestic	16 acres by flooding (a)	390	Approp.	--	--	1893	Gravity; log dam with 0.4 mile of earth ditch.	Former owners: John F. Ince, Frank Shearin.
17N/7E-982 (Sheet 8)	Lee C. Waddell	East Fork Indian Creek	Irrig.	4 acres by flooding	359	Approp.	--	--	Prior 1900	Gravity; log dam with 0.2 mile of earth ditch.	
17N/7E-983 (Sheet 8)	Way Head	East Fork Indian Creek	Irrig.	53 acres by flooding ^a	689	Approp.	--	--	1896	Gravity; log dam with 0.9 mile of earth ditch.	Former owners: Jack Ince, Harry Bryan. Area irrigated received supplemental supply from 17N/7E-984.
17N/7E-984 (Sheet 8)	Way Head	East Fork Indian Creek	Irrig.	(e)	860 ^a	Approp.	--	--	1896	Gravity; log dam with 0.8 mile of earth ditch.	Former owners: Jack Ince, Harry Bryan. Amount diverted supplemented 17N/7E-983.
17N/7E-15N1 (Sheet 8)	Thomas Roberts	Luther Gulch	Irrig. Indust.	(s) (e)	(e)	Approp. ^a	0.006 cfs 0.006 cfs	A-14456 ^b A-14457 ^b	Prior 1910	Gravity; rock dam with 0.1 mile of earth ditch.	Amount diverted and extent of use reported under 17N/7E-1642 water right listed in name of Frank Kanig and Thomas Roberts.
17N/7E-1641 (Sheet 8)	J. F. Sharp Lumber Company	Indian Creek	Indust.	Lumber mill	Not meas.	Approp.	--	--	1949	Pumps; 30 hp, 2 hp and two 25 hp motors with 300 feet of 6-inch pipe.	Name changed from Yellow Fir Lumber Co. to J. F. Sharp Lumber Co. in 1958.
17N/7E-1642 (Sheet 8)	Thomas Roberts ^a	Indian Creek	Irrig. Indust.	44 acres by flooding Plywood mill	580 ^a	(c)	--	--	1910	Gravity; rock dam with 1.3 miles of earth ditch.	Former owners: Fred Pine, Wright, Gray Eagle Mine. Other water user: Willamette Plywood Corp. Amount diverted includes all water from 17N/7E-15N1.
17N/7E-16Q1 (Sheet 8)	Willamette Plywood Corp.	Spring tributary to Indian Creek	Indust. Domestic	Plywood mill 10 connections	Not meas.	Approp.	0.10 cfs	A-16296 ^b	1955	Gravity; wood box with 0.6 mile of 1.5-inch pipe.	

^a See remarks.
^b Information not available.
For lettered footnotes, see last page of table.

TABLE 4 (Continued)
DESCRIPTIONS OF SURFACE WATER DIVERSIONS IN
KLAMATH RIVER HYDROGRAPHIC UNIT

Location number and/or Plate 2 sheet number	Diversion name and/or owner	Source	Water use in 1958		Amount diverted acre-feet	Apparent water right		Indicated date of appropriation or first use	Description of diversion system	Remarks
			Purpose	Extent and method of use		Type	Amount			
HAPPY CAMP SUBUNIT (Continued)										
H. R. & M. 17N/7E-16E1 (Sheet 8)	Frank Attebery Alve Hockaday	Indian Creek	Irrig. *	(*)	None	Approp.	--	--	Prior 1900	Gravity; earth and log dam with 1.7 miles of earth ditch. Former owners: Charles Cole, Guy Head. Previously irrigated 10 acres.
17N/7E-22E1 (Sheet 8)	Aubrey A. Hall	Tributary to Indian Creek	Domestic Stock.	7 connections 11 head	54	(c)	--	--	Prior 1920	Gravity; 1.4 miles of earth ditch. Former owner: Jim Whittaker.
17N/7E-26E1 (Sheet 8)	Aubrey A. Hall	Indian Creek	Irrig.	10 acres by sprinkler	11	Alparian	--	--	1956	Pump; 7.5 hp motor with 4-inch pipeline.
17N/7E-26E1 (Sheet 8)	Arthur Attebery	Slater Creek	Irrig. Domestic	4 acres by flooding (a)	Not meas.	Approp.	300 MI 300 MI	Sk. 4, p. 131 Sk. 6, p. 59	1894	Gravity; earth dam with 0.2 mile of earth ditch and wood flume. Former owners: A. S. Hendrickson, Frank Luckert.
17N/7E-27E1 (Sheet 8)	Charley Carnes C. T. Howard	Spring tributary to Indian Creek	Domestic	15 connections	Not meas.	(c)	--	--	1948	Gravity; concrete box with 1,200 feet of 3-inch and 2-inch pipe. Former owner: John A. Woodcock.
17N/7E-34E1 (Sheet 8)	Edward Head	Doolittle Creek	Irrig. Domestic	12 acres by flooding (a)	133	Alparian	--	--	1885	Gravity; earth and rock dam with 0.7 mile of earth ditch. Former owners: Charles Swan, Glen Hill.
17N/8E-17E1 (Sheet 8)	Mrs. Felix H. McGinnis	Thompson Creek	Irrig. Domestic	7 acres by sprinkler 9 connections	Not meas.	Approp.	--	--	Prior 1875	Gravity; earth and rock dam, 3 feet high, 80 feet long with 1.4 miles of earth ditch. Former owner: Sam Woods.
18N/6E-25E1 (Sheet 1)	Dane H. Curry	Indian Creek	Mining Domestic Power	Placer (a) 4 kw.	670	Approp.	2.5 cfs 1.15 cfs	A-976 ² A-1174 ²	Prior 1900	Gravity; log dam with 0.6 mile of earth ditch. Former owner: Buckmaster.
18N/7E-22E1 (Sheet 1)	W. H. Bussert	Swearington Gulch	Irrig. Domestic Stock.	16 acres by flooding (a) 15 head	80	Alparian	--	--	1860	Gravity; rock dam with 0.2 mile of earth ditch. Former owners: Swearington, Ed Kemper.
M. D. R. & M. 46N/12E-30E1 (Sheet 9)	Nolly Thomas	Chins Creek	Irrig. Domestic	12 acres by flooding (a)	56	Approp.	--	--	1883	Gravity; sand bag dam with 0.4 mile of earth ditch.

* See remarks.
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TABLE 4 (Continued)
DESCRIPTIONS OF SURFACE WATER DIVERSIONS IN
KLAMATH RIVER HYDROGRAPHIC UNIT

Location number and/or Plate 2 sheet number	Diversion name and/or owner	Source	Water use in 1958			Apparent water right			Indicated date of appropriation or first use	Description of diversion system	Remarks
			Purpose	Extent and method of use	Amount diverted in acre-feet	Type	Amount	Reference			
HAPPY CAMP SUBUNIT (Continued)											
M. D. B. & H. 47N/12W-32E1 (Sheet 5)	R. T. Hamer*	Fort Goff Creek	Irrig. Mining	4 acres by flooding Placer	780	Approp.	--	--	Prior 1880	Gravity; concrete and log dam with 0.5 mile of earth ditch.	Former owners: Charles H. Bailey, Martin, Shulemar. Other water users: Colford, Henry, Leduc, Martin, Savage.
47N/12W-32E1 (Sheet 5)	Chester H. Berton	Fort Goff Creek	Irrig.	6 acres by flooding	374	Riparian	--	--	Prior 1880	Gravity; rock dam 1 foot high, 30 feet long with 0.4 mile of earth ditch.	Former owner: Martin.
HORN BROOK SUBUNIT**											
46N/4W-15D1 (Sheet 11)	Etta O. Enzele	Parker Creek	Irrig.	(*)	(*)	Approp.	5.0 cfs	A-2973 ^b	1915	Gravity; earth and rock dam with 0.8 mile of earth ditch.	Former owners: Jerome and John Kuck. Amount diverted and extent of use reported under 46N/4W-15N1.
46N/4W-15N1 (Sheet 11)	Etta O. Enzele	Bogue Creek	Irrig.	305 acres by flooding*	257*	Approp.	--	--	About 1870	Gravity; earth and rock dam with 2.1 miles of earth ditch and 2.9 miles of natural stream channel to a storage reservoir.	Former owners: Diederich Kuck, Jerome and John Kuck. Amount diverted includes all water from 46N/4W-15D1.
46N/4W-28J1 (Sheet 11)	R. W. Thomason*	North Branch Willow Creek	Irrig.	35 acres by flooding	151	Riparian	--	--	About 1860	Gravity; rock dam with 2.1 miles of earth ditch.	Former owners: Chandler, Coombs. Subsequent owner: Wm. J. Guardia.
46N/4W-32A1 (Sheet 11)	Anthony J. Sylva	North Branch Willow Creek	Irrig.*	(*)	None	Riparian	--	--	Prior 1958	Gravity; earth and rock dam with 0.4 mile of earth ditch.	Former owners: Southern Pacific Co. Irrigated 22 acres until 1956.
46N/4W-32B1 (Sheet 11)	Anthony J. Sylva	Middle Branch Willow Creek	Irrig.	7 acres by flooding*	Not meas.	Approp.	--	--	Prior 1958	Gravity; 0.6 mile of 6-inch pipe.	Former owners: Manual Sylva, George I. Sylva. Previously irrigated an additional 5 acres.
46N/4W-33D1 (Sheet 11)	Anthony J. Sylva	North Branch Willow Creek	Irrig.	5 acres by flooding*	68	Approp.	--	--	Prior 1958	Gravity; wood dam with 0.8 mile of earth ditch.	Former owners: Southern Pacific Co. Previously irrigated an additional 8 acres.
46N/5W-51L* (g)	Donald E. and Avelyn L. Fehlman	Tributary to Willow Creek	Irrig.*	(*)	None	Approp.	0.5 cfs	A-1734 ^d	About 1950	Pump; 15 hp motor with 0.1 mile of 4-inch pipe.	Former owners: Dickerson, Alanthorp. Portable pump also used at 46N/5W-7A1. Previously irrigated 83 acres.

** See Addendum to Hornbrook Subunit for diversions located after preliminary edition was published.

* See remarks. Information not available.

DESCRIPTIONS OF SURFACE WATER DIVERSIONS IN
 KLAMATH RIVER HYDROGRAPHIC UNIT

Location number and/or Plate 2 sheet number	Diversion name and/or owner	Source	Water use in 1958			Apparent water right			Indicated date of appropriation or first use	Description of diversion system	Remarks
			Purpose	Extent and method of use	Amount diverted in acre-feet	Type	Amount	Reference			
HORN BROOK SUBUNIT (Continued)											
M D B & M 46N/5W-7A1* (Sheet 11)	Donald E. and Avelyn L. Fehlman	Willow Creek	Irrig. Stock.	20 acres by sprinkler 175 head	Not meas.	Approp.	0.45 cfe	A-1734 ^b	About 1950	Pump; 15 hp motor with 0.3 mile of 4-inch pipe.	Former owners: Dickerson, Alanthorp. Portable pump also used at 46N/5W-511.
46N/5W-7H1* (Sheet 11)	Alan Williams	Willow Creek	Irrig. Stock.	48 acres by sprinkler 50 head	Not meas.	Approp.	--	--	Prior 1900	Pump; 15 hp engine with 0.5 mile of 3-inch pipe.	Former owner: Keggs. Portable pump location varies within 0.4 mile of location indicated.
46N/5W-11Q1 (Sheet 11)	Russell Frederick	Tributary to Willow Creek	Irrig.	15 acres by sprinkler	64	Approp.	0.76 cfe	A-17765 ^b	About 1918	Gravity; earth dam with 0.2 mile of earth ditch.	Former owners: Browns, Hoggla, Peter Buckley.
46N/5W-22Q1 (Sheet 11)	Benjamin H. Hager	Willow Creek	Irrig.	381 acres by flooding	1,041	Riparian	--	--	Prior 1958	Gravity; 4.0 miles of earth ditch and 0.4 mile of natural channel.	Former owners: Anton, Bryant, Clevenger.
46N/5W-27A1 (Sheet 11)	Fred Reed*	Spring tributary to Willow Creek	Irrig.	(*)	Not meas.	Riparian	--	--	Prior 1958	Gravity; 0.8 mile of earth ditch.	Ownership changed to Waleey Hugue in 1959. Amount diverted supplemented 46N/5W-27F1.
46N/5W-27F1 (Sheet 11)	Fred Reed*	Spring tributary to Willow Creek	Irrig.	100 acres by flooding	Not meas.	(c)	--	--	1957	Gravity; earth dam 15 feet high, 400 feet long with earth ditch.	Ownership changed to Waleey Hugue in 1959. Area irrigated received supplemental supply from 46N/5W-27A1.
46N/5W-28R1 (Sheet 11)	Clarence Kuck	Spring tributary to Willow Creek	Irrig.	26 acres by flooding	20	Approp.	1.1 cfe	A-16648 ^b	1956	Gravity; pump with 0.4 mile of earth ditch.	
46N/6W-6D1 (c)	Louie Ford	Printer Gulch	Mining*	(*)	None	Approp.	0.75 cfe	A-12745 ^b	Prior 1900	Gravity; 0.7 mile of earth ditch.	Supplied a placer mine until 1957.
47N/4W-211 (Sheet 7)	Cheasbrough, W. E. McKenzie	Cold Creek	Irrig. Stock.	120 head	368*	Approp.	--	--	Prior 1890	Gravity; rock dam with 0.4 mile of earth ditch.	Former owner: George McCline, Sr., George McCline. Amount diverted supplemented 47N/4W-1883.
47N/4W-511 (Sheet 7)	J. W. Edwards	Spring tributary to Iron Creek	Irrig. Stock.	75 acres by flooding 20 head	Not meas.	Approp.	--	--	Prior 1910	Gravity; earth and rock dam with 0.4 mile of earth ditch.	Former owner: Freeman.

* See remarks.

-- Information not available.

For lettered footnotes, see last page of table.

TABLE 4 (Continued)
DESCRIPTORS OF SURFACE WATER DIVERSIONS IN
KLAMATH RIVER HYDROGRAPHIC UNIT

Location number and/or Plots 2 sheet number	Diversion name and/or owner	Source	Water use in 1958			Apparent water right			Indicated date of appropriation or first use	Description of diversion system	Remarks
			Purpose	Extent and method of use	Amount diverted in acre-feet	Type	Amount	Reference			
HORN BROOK SUBUNIT (Continued)											
M D B & M 47N/4W-18Q1 (Sheet 7)	J. W. Edwards	Spring tributary to Iron Creek	Irrig. Stock.	51 acres by flooding --	Not meas.	Approp.	--	--	Prior 1910	Gravity: earth and rock dam with 0.8 mile of earth ditch.	Former owner: Freeman.
47N/4W-18Q1 (Sheet 7)	Cold Creek Ranch Ralph J. Oplizke	Cold Creek	Irrig.	187 acres by flooding	Not meas.	(c)	--	--	Prior 1958	--	
47N/4W-18Q1 (Sheet 7)	Silva-Lindich Ditch E. G. Lemas Oliver A. and Floyd M. Rosebush	Cold Creek	Irrig. Stock. Power	108 acres by flooding* 125 head 1.6 kw.	1,637*	Riparian	--	--	Prior 1890	Gravity: earth and rock dam with 6.8 miles of earth ditches.	Former owners: J. Silva Stewart. Area irrigated located in Copco Lake Subunit. Amount diverted irrigated an additional 28 acres jointly with 47N/4W-18Q1 (Copco Lake Subunit).
47N/4W-18Q1 (Sheet 7)	Jones Ditch Dr. Vagoli*	Spring tributary to Bogus Creek	Irrig. Stock. Power	362 acres by flooding* 200 head --	1,529*	Approp.	--	--	Prior 1900	Gravity: 0.2 mile of 18-inch pipe and 7.0 miles of earth ditch.	Former owners: Jones Bros., Bradley. Subsequent owner (1958): J. J. Pendley & Sons. Previously irrigated an additional 21 acres. Amount diverted irrigated an additional 6 acres jointly with 47N/5W-13Q1 which is normally irrigated by 47N/5W-13Q1.
47N/4W-18Q2 (Sheet 7)	Elsie Bloomingcamp J. N. Foster	Spring tributary to Cold Creek	Irrig. Domestic Power	(*) (a) --	538*	Riparian	--	--	About 1925	Gravity: earth and rock dam with 1.1 miles of earth ditch.	Supplements 47N/4W-18Q1 and -18Q1 for use reported thereunder.
47N/4W-18Q3 (Sheet 7)	Cheesbrough W. E. McKenzie	Spring tributary to Cold Creek	Irrig. Stock. Domestic	101 acres by flooding* 120 head (a)	830	Approp.	--	--	About 1897	Gravity: earth and rock dam with 1.5 miles of earth ditch.	Former owners: George McCline, Sr., George McCline. Area irrigated received supplemental supply from 47N/4W-18Q1.
47N/4W-18Q4 (Sheet 7)	Cheesbrough J. N. Foster W. E. McKenzie	Spring tributary to Cold Creek	Irrig. Stock.	18 acres by flooding* 120 head	482	Approp.	--	--	Prior 1890	Gravity: 1.9 miles of earth ditch.	Former owners: George McCline, Sr., George McCline. Previously irrigated an additional 30 acres.
47N/4W-18Q1 (Sheet 7)	John B. Fitzgerald	Cold Creek	Irrig. Stock. Domestic	34 acres by flooding* 90 head (a)	766*	Approp.	--	--	Prior 1880	Gravity: earth and rock dam with 1.1 miles of earth ditch.	Former owner: White. Irrigated an additional 13 acres jointly with 47N/5W-13Q1.
47N/4W-18Q1 (Sheet 7)	Elsie Bloomingcamp J. N. Foster	Bogus Creek	Irrig. Stock.	72 acres by flooding 160 head	489	Approp.	--	--	Prior 1900	Gravity: concrete dam 7 feet high, 20 feet long with 1.3 miles of earth ditch.	
47N/4W-20P1 (Sheet 7)	J. N. Foster	Little Springs Canyon	Irrig. Stock.	5 acres by flooding* 100 head	452*	Riparian	--	--	Prior 1900	Gravity: 1.0 mile of earth ditch.	Former owners: Malloy, Hostolder, DeWitt, Boulder, Hatchar. Portion of amount diverted supplements 47N/4W-20Q1 for use reported thereunder.

* See remarks.
-- Information not available.

TABLE 4 (Continued)
DESCRIPTIONS OF SURFACE WATER DIVERSIONS IN
KLAMATH RIVER HYDROGRAPHIC UNIT

Location number and/or sheet number	Diversion name and/or owner	Source	Water use in 1958		Amount diverted in acre-feet	Apparent water right		Indicated date of approval or first use	Description of diversion system	Remarks	
			Purpose	Extent and method of use		Type	Amount				Reference
HORN BROOK SUBUNIT (Continued)											
M. D. B. & M. 47N/5W-11J1 (Sheet 7)	John B. Fitzgerald	Bullhead Creek	Irrig.	6 acres by flooding	Not meas.	Approp.	--	--	Prior 1880	Gravity; earth and rock dam with 0.3 mile of earth ditch.	Former owners: Chesabrough, White.
47N/5W-11M1 (Sheet 7)	Mary Ann Quadros	Bullhead Creek	Irrig.*	(*)	None	Approp.	--	--	About 1917	Gravity; timber dam with 0.8 mile of earth ditch.	Former owner: Joe Quadros. Previously irrigated 13 acres.
47N/5W-12N1 (Sheet 7)	John B. Fitzgerald	Bullhead Creek	Irrig.	32 acres by flooding	Not meas.	Approp.	--	--	Prior 1880	Gravity; earth and rock dam with 0.7 mile of earth ditch.	Former owners: Chesabrough, White.
47N/5W-13G1 (Sheet 7)	L. F. Smud	Bogus Creek	Irrig. Domestic	10 acres by flooding ^a (a)	159 ^a	Approp.	--	--	Prior 1900	Gravity; wood dam with 0.8 mile of earth ditch.	Former owner: C. White. Amount diverted irrigated an additional 6 acres jointly with 47N/4W-1861, which is normally irrigated by 47N/5W-13M1, and another 13 acres jointly with 47N/4W-1861.
47N/5W-13M1 (Sheet 7)	D. B. O'Brien	Bogus Creek	Irrig. ^a	(*)	None	Riparian	--	--	Prior 1930	Gravity; concrete, earth and rock dam with 0.3 mile of earth ditch.	Former owner: Cornin. In 1958 the 6 acres normally irrigated by this diversion was irrigated by 47N/4W-1861 and 47N/5W-13G1.
47N/5W-14E1 (Sheet 7)	Jess and Nelson Franklin Mary Ann Quadros	Bogus Creek	Irrig.	13 acres by flooding	Not meas.	Approp.	--	--	Prior 1885	Gravity; wood dam with 0.7 mile of earth ditch.	Former owner: Lopez.
47N/5W-16D1 (Sheet 7)	California-Oregon Power Company	Bogus Creek	Irrig.	9 acres by sprinkler	557	Riparian	--	--	Prior 1958	Gravity; 0.5 mile of earth ditch.	Former owners: John Franklin, Black, Bell.
47N/5W-17W1 (Sheet 7)	James Liskey	Klamath River	Irrig.	12 acres by sprinkler	10	Riparian	--	--	1950	Pump; 20 hp gas engine with 6-inch pipeline.	Former owner: Charles Liskey.
47N/5W-19A1 (Sheet 7)	Lauran Paine	Klamath River	Irrig.	3 acres by flooding	19	Riparian	--	--	1848	Pump; electric motor with 0.2 mile of earth ditch.	Former owners: Diehl, Fred Moore, Manual Correll, Hershey Schollenberg.
47N/5W-19D1 (Sheet 7)	Lauran Paine	Klamath River	Irrig.	22 acres by flooding	76	Riparian	--	--	Prior 1958	Pump; 10 hp motor with 0.6 mile of earth ditch.	

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-- Information not available.
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TABLE 4 (Continued)
DESCRIPTIONS OF SURFACE WATER DIVERSIONS IN
KLAMATH RIVER HYDROGRAPHIC UNIT

Location number and/or Plate 2 sheet number	Diversion name and/or owner	Source	Water use in 1958		Amount diverted in acre-feet	Apparent water right			Indicated date of appropriation or first use	Description of diversion system	Remarks
			Purpose	Extent and method of use		Type	Amount	Reference			
HORN BROOK SUBUNIT (Continued)											
M O B & M 47N/54-19P1 (Sheet 7)	Kenneth Boucton	Klamath River	Irrig.	15 acres by flooding	134	Riparian	--	--	Prior 1958	Pump; 10 hp motor with 85 feet of 11-inch pipe and 0.3 mile of earth ditch.	Former owners: Laird, Weyerhaeuser Realty Company, Louis Freitas.
47N/54-28N1 (Sheet 7)	S. B. Cairns	Little Bogus Creek	Irrig.*	(*)	None	Approp.	--	--	Prior 1914	Gravity; earth and rock dam with 0.4 mile of earth ditch.	Former owner: Deaseva. Previously irrigated 9 acres.
47N/54-30D1 (Sheet 7)	Lam LeRoy Thill	Klamath River	Irrig.	18 acres by flooding	94	Riparian	--	--	Prior 1958	Pump; 25 hp motor with 340 feet of 8-inch pipe to small reservoir and 0.3 mile of earth ditch.	Former owner: Horn.
47N/54-6B1 (Sheet 6)	Louis Alfonso	Hutton Creek	Irrig. Stock.	30 acres by flooding 60 head	Not meas.	Approp.	0.008 cfs	A-11677 ^b	Prior 1940	Gravity; rock, gravel and sand-bag dam 1.5 feet high, 12 feet long with 60 feet of 10-inch pipe and 0.6 mile of earth ditch.	Former owners: Greeves, Luke Lange.
47N/54-7E1 (Sheet 6)	L. O. Robertson	Cottonwood Creek	Irrig. Stock.	26 acres by flooding 30 head	514	(c)	--	--	Prior 1958	Gravity; rock, timber and sheet metal dam 6 feet high, 30 feet long with 50 feet of 24-inch pipe and 0.8 mile of earth ditch.	
47N/54-17D1 (Sheet 6)	Bill Rogers Alfred W. and C. F. Spearin	Cottonwood Creek	Irrig. Stock.	17 acres by flooding 50 head	227	(c)	--	--	Prior 1958		
(7)	Ellie Ditch Bill Rogers Alfred W. and C. F. Spearin	Cottonwood Creek	Irrig.	29 acres by flooding*	1,157	Approp.	--	--	1869	Gravity; rock and timber dam 3 feet high, 10 feet long with 2.4 miles of earth ditch.	Former owners: David Horn, Cordosa. Previously irrigated an additional 5 acres. Irrigated an additional 19 acres jointly with 47N/54-21M.
47N/54-17Q1 (Sheet 6)	C. F. Spearin	Cottonwood Creek	Irrig.	14 acres by flooding	256	Approp.	--	--	About 1965	Gravity; timber dam 30 feet long with 0.3 mile of earth ditch.	Former owner: David Horn.
47N/54-18E1 (Sheet 6)	Bob Cummins	Ditch Creek	Irrig.	6 acres by flooding	26	Riparian	--	--	Prior 1924	Gravity; timber and sheet metal dam 2.5 feet high, 12 feet long with 45 feet of 6-inch pipe to 0.3 mile of wood flume and earth ditch.	Former owners: Fox, Sanders.

* See remarks.
-- Information not available.
For lettered footnotes, see last page of table.

TABLE 4 (Continued)

DESCRIPTIONS OF SURFACE WATER DIVERSIONS IN
KLAMATH RIVER HYDROGRAPHIC UNIT

Location number and/or Plate 2 sheet number	Diversion name and/or owner	Source	Water use in 1958			Apparent water right			Indicated date of appropriation or first use	Description of diversion system	Remarks
			Purpose	Extent and method of use	Amount diverted in acre-feet	Type	Amount	Reference			
HORN BROOK SUBUNIT (Continued)											
M D B & M 47N/64-1821 (Sheet 6)	L. O. Robertson	Ditch Creek	Irrig. Stock.	40 acres by flooding --	223	(c)	--	--	Prior 1957	Gravity: lug and sheet metal dam 2 feet high, 8 feet long with 0.5 mile of earth ditch.	Former owners: Bill Smith, Greaves, Luke Lange.
47N/64-1822 (Sheet 6)	L. O. Robertson	Ditch Creek.	Irrig. Stock.	11 acres by flooding* 40 head	79* (19)*	(c)	--	--	Prior 1958	Gravity: rock dam with 0.5 mile of earth ditch.	Former owners: Greaves, Luke Lange. Portion of amount diverted supplemented 47N/64-17E1 for use listed thereunder. Amount in parentheses is a 1959 measurement.
(r) 47N/64-1921 (Sheet 6)	Elmer and Robert Julian	Rancheria Gulch	Irrig.	12 acres by flooding*	167	(c)	--	--	Prior 1908	Gravity: rock and timber dam with 0.6 mile of earth ditch.	Former owners: Strobeck, McCalley, Wagner, Bradley. Previously irrigated an additional 48 acres.
47N/64-2021 (Sheet 6)	Hornbrook Water Company	Rancheria Gulch	Municip.	250 persons	460	Approp.	--	--	1904	Gravity: concrete dam 2 feet high, 12 feet long with 0.3 mile of pipe and earth ditch.	
47N/64-2021 (Sheet 6)	Black Mountain * Ranch	Cottonwood Creek	Irrig.	23 acres by flooding	355	Approp.	--	--	About 1890	Gravity: rock and gravel dam 6 feet high, 40 feet long with 1.6 miles of earth ditch.	Former owner: Marshall Horn.
47N/64-2121 (Sheet 6)	Black Mountain * Ranch Alfred W. Spearin	Cottonwood Creek	Irrig.	21 acres by flooding*	1,147*	(c)	--	--	Prior 1958	Gravity: rock and gravel dam 6 feet high, 30 feet long with 1.7 miles of earth ditch.	Former owner: Marshall Horn. Amount diverted supplements 47N/64-27H1 for use reported thereunder. Irrigated an additional 19 acres jointly with 47N/64-17E1.
47N/64-2521 (Sheet 6)	Alfred A. Protzman	Klamath River	Irrig. Stock.	40 acres by flooding 150 head	199	Riparian	--	--	About 1908	Pump: 7.5 hp motor with 0.2 mile of 10-inch pipe and 0.6 mile of earth ditch.	Former owner: Marshall Horn.
47N/64-2521 (Sheet 6)	Alfred A. Protzman	Klamath River	Irrig.	26 acres by flooding	94	Riparian	--	--	About 1908	Pump: 7.5 hp motor with 0.2 mile of 8-inch pipe and 0.3 mile of earth ditch.	
47N/64-2721 (Sheet 6)	Black Mountain * Ranch	Klamath River	Irrig.	249 acres by flooding*	86*	Riparian	--	--	Prior 1958	Pump: 25 hp motor with 1.3 miles of earth ditch.	Former owner: Marshall Horn. Amount diverted supplemented by 47N/64-21M1 and -27H2.
47N/64-2722 (Sheet 6)	Black Mountain * Ranch	Klamath River	Irrig.	(*)	91*	Riparian	--	--	Prior 1958	Pumps: two 15 hp motore with 1.0 mile of earth ditch.	Former owner: Marshall Horn. Amount diverted supplemented 47N/64-27H1.

* See remarks.

-- Information not available.

For lettered footnotes, see last page of table.

TABLE 4 (Continued)
DESCRIPTORS OF SURFACE WATER DIVERSIONS IN
KLAMATH RIVER HYDROGRAPHIC UNIT

Location number and/or Plate 2 sheet number	Overlapon name and/or owner	Source	Water use in 1958			Apparent water right			Indicated date of appropriation or first use	Description of diversion system	Remarks
			Purpose	Extent and method of use	Amount diverted in acre-feet	Type	Amount	Reference			
HORN BROOK SUBUNIT (Continued)											
M D B & N 47N/6W-28C1 (Sheet 6) (f)	Black Mountain* Ranch	Cottonwood Creek	Irrig.	26 acres by flooding*	229*	(c)	--	--	About 1850	Gravity; gravel dam with 1.0 miles of earth ditch.	Former owner: Marshall Horn. Portion of amount diverted supplemented 47N/6W-28F1 for use listed thereunder.
47N/6W-29E1 (Sheet 6)	Fred Draggoo	Rocky Gulch	Irrig. Stock.	56 acres by flooding* 15 head	7	(c)	--	--	Prior 1958	Gravity; earth and concrete dam with 0.2 mile of 12-inch pipe and 0.8 mile of earth ditch.	Area irrigated received supplemental supply from 47N/7W-24C1.
47N/6W-33D1 (Sheet 6)	George E. Galliach	Klamath River	Irrig.	22 acres by flooding and sprinkler	155	Riparian	--	--	About 1890	Pump; one 15 hp motor and one tractor powered, with 0.5 mile of earth ditch and pipeline.	Former owners: Central Pacific Railroad Company, William and Laura Lowe.
47N/6W-36A1 (Sheet 6)	Louie Freitas	Willow Creek	Irrig. Stock.	14 acres by flooding* 75 head	53	Riparian	--	--	Prior 1887	Gravity; earth and rock dam with 0.5 mile of earth ditch.	Former owners: Bill Laird, Weyerhaeuser Realty Company. Previously irrigated an additional 5 acres.
47N/7W-1F1 (Sheet 6)	Cottonwood Irrigation and Mining Company	Cottonwood Creek	Irrig.	268 acres by flooding*	1,349* (137)	Approp.	--	--	About 1867	Gravity; rock dam with 5.3 miles of earth ditch.	Previously irrigated an additional 24 acres. Amount in parentheses is a 1959 measurement. Portion of amount diverted supplements 47N/6W-17N1.
47N/7W-1F2 (Sheet 6)	John Sylva	Cottonwood Creek	Irrig. Stock.	11 acres by flooding 40 head	136	Riparian	--	--	Prior 1901	Gravity; timber dam 1 foot high, 20 feet long with 0.2 miles of earth ditch.	Former owners: Central Pacific Railroad Company, Samuel W. Clary, Charles T. Moore.
47N/7W-1G1 (Sheet 6)	Herman Kurt	Cottonwood Creek	Irrig. Stock.	31 acres by flooding 100 head	424	(c)	--	--	Prior 1918	Gravity; timber dam 1.5 feet high, 25 feet long with 0.3 mile of earth ditch.	Former owners: Sam Clary, Jess Wilkes.
47N/7W-4M1 (Sheet 6)	Fruit Growers Supply Company	Bogard Gulch	Municip.	(*)	Not meas.	(c)	--	--	1911	Gravity; timber dam 8 feet high, 45 feet long with approximately 4.0 miles of 4- and 6- inch pipe.	Supplies community of Hilt.
47N/7W-5G1 (Sheet 6)	Walter Wreden*	West Fork Cottonwood Creek	Irrig.	47 acres by flooding	Not meas.	Riparian	--	--	Prior 1923	Gravity; log dam 3 feet high, 15 feet long with 1.5 miles of earth ditch and wood flume.	Former owner: Reginald Parsons. Ownership changed to H. C. Watson in 1959.
47N/7W-12H1 (Sheet 6)	S. D. Haworth	Moore Gulch	Irrig.	(*)	25*	Approp.	0.50 cfs	A-3697 ^b	1909	Gravity; rock and gravel dam with 0.4 mile of earth ditch.	Former owners: Marion Cummins, Swartz, Daly. Amount diverted irrigated 13 acres jointly with 47N/7W-12H2.

* See remarks.
-- Information not available.
For lettered footnotes, see last page of table.

TABLE 4 (Continued)
DESCRIPTIONS OF SURFACE WATER DIVERSIONS IN
KLAMATH RIVER HYDROGRAPHIC UNIT

Location number and/or plate 2 sheet number	Diversion name and/or owner	Source	Water use in 1958			Apparent water right			Indicated date of appropriation or first use	Description of diversion system	Remarks
			Purpose	Extent and method of use	Amount diverted in acre-feet	Type	Amount	Reference			
HORN BROOK SUBUNIT (Continued)											
M. D. B. & M. 47N/7W-12H2 (Sheet 6)	S. D. Haworth	Hoors Gulch	Irrig.	(*)	32*	Approp.	0.50 cfs	A-3697 ^b	1909	Gravity; rock and gravel dam with 0.2 mile of earth ditch.	Former owners: Marion Cummins, Swartz, Daly. Amount diverted irrigated 13 acres jointly with 47N/7W-12H1.
47N/7W-24C1 (Sheet 6)	Fred Draggoo Allen Jespersen	Ditch Creek	Irrig. Stock.	103 acres by flooding 200 head	828*	Approp.	--	--	Prior 1914	Gravity; rock dam with 4.2 miles of earth ditch.	Former owners: Bray, Carl Cummins, Cunnane. Previously irrigated an additional 41 acres. Portion of amount diverted supplemented 47N/6W-29E1.
48N/5W-21N1 (Sheet 4)	Doan Madero	Camp Creek	Irrig.	27 acres by flooding	64	Riparian	--	--	About 1889	Gravity; 1.5 miles of earth ditch.	Former owner: Thomas J. Wright.
48N/6W-31R1 (Sheet 3)	Lawrence Lemos	Hutton Creek	Irrig.	11 acres by flooding	166	Riparian	--	--	About 1872	Gravity; rock and gravel dam with 0.5 mile of earth ditch.	Former owners: Manuel and Mary Crovell, Elves and Gilson.
48N/6W-32N1 (Sheet 3)	Lawrence Lemos	Hutton Creek	Irrig. Stock.	40 acres by flooding 150 head	191	Riparian	--	--	About 1872	Gravity; rock and gravel dam with 1.4 miles of earth ditch.	Former owners: Manuel and Mary Crovell, Elves and Gilson.
48N/7W-15C1 (Sheet 3)	F. L. Burns	Whiskey Creek	Irrig. Stock.	47 acres by flooding 250 head	388	Riparian	--	--	About 1861	Gravity; earth dam with 0.2 mile of earth ditch.	Former owners: Rufus Cole, William J. Bray, E. W. Sawyer.
48N/7W-15C2 (Sheet 3)	F. L. Burns	Cottonwood Creek	Irrig.	67 acres by flooding*	829	(c)	--	--	1862	Gravity; earth dam with 1.2 miles of earth ditch.	Former owner: Rufus Cole. Area irrigated received supplemental supply from 48N/7W-15D1.
48N/7W-15D1 (Sheet 3)	F. L. Burns	Spaulding Creek	Irrig.	10 acres by flooding*	315*	Riparian	--	--	Prior 1890	Gravity; earth and rock dam with 0.5 mile of earth ditch.	Former owners: Rufus Cole, Smith, E. W. Sawyer. Portion of amount diverted supplemented 48N/7W-15C9.
48N/7W-21C1 (Sheet 3) (r)	F. L. Burns	Spaulding Creek	Irrig. Stock.	15 acres by flooding 100 head	304	Riparian	--	--	Prior 1890	Gravity; earth and rock dam with 1.7 miles of earth ditch.	Former owners: Rufus Cole, Smith, E. W. Sawyer.
48N/7W-28E1 (Sheet 3)	Fruit Growers Supply Company	Hunts Creek	Indust. Municip.	Lumber mill (*)	Not meas.*	(c)	--	--	1911	Gravity; timber dam 10 feet high, 35 feet long with approximately 1.6 miles of 10-inch pipe.	Amount diverted supplemented 47N/7W-4M1. Supplies community of Hilt.
48N/7W-34F1 (Sheet 3)	Walter Wreden	West Fork Cottonwood Creek	Irrig. Stock.	36 acres by flooding 40 head	738	(c)	--	--	Prior 1955	Gravity; rock dam with 1.0 mile of earth ditch.	Former owner: Reginald Parsons.

* See remarks.
-- Information not available.
For lettered footnotes, see last page of table.

TABLE 4 (Continued)
DESCRIPTIONS OF SURFACE WATER DIVERSIONS IN
KLAMATH RIVER HYDROGRAPHIC UNIT

Location number and/or plate 2 sheet number	Diversion name and/or owner	Source	Water use in 1958			Apparent water right			Indicated date of appropriation or first use	Description of diversion system	Remarks
			Purpose	Extent and method of use	Amount diverted in acre-feet	Type	Amount	Reference			
KLAMATH GLEN SUBUNIT											
H B & W. 10N/4E-32C1 (Sheet 29)	William Bow	Burrill Creek	Irrig.	(*)	280 ^a	(c)	--	--	Prior 1950	Gravity; rock dam with 0.6 mile of earth ditch.	Former owners: William Burrill, Martha Cooper. Normally irrigates 46 acres jointly with 10N/4E-32F1, but only 34 acres received irrigation in 1958.
10N/4E-32E1 (Sheet 29)	Sam Jones	Springs tributary to Burrill Creek	Power	5 kw.	485	(c)	--	--	Prior 1900	Gravity; 10-inch pipe in waterfall with 0.4 mile of earth ditch and 8-inch pipe.	
10N/4E-32F1 (Sheet 29)	Homer Cooper	Burrill Creek	Irrig. Power	(*) 5 kw.	576 ^a	Approp.	--	--	About 1950	Gravity; rock dam with 0.3 mile of earth ditch and 8- and 6-inch pipe.	Former owners: William Burrill, Martha Cooper. Normally irrigates 46 acres jointly with 10N/4E-32C1, but only 34 acres received irrigation in 1958.
13N/1E-15D1 (Sheet 20)	Simonsen Lumber Company	Klamath River	Indust.	Lumber mill	212	(c)	--	--	1955	Pump; electric motor with short 8-inch pipe.	Former owner: Robinet Wood Products.
14N/1E-20K1 (Sheet 17)	Roy Thompson	Tributary to Pacific Ocean	Domestic	6 connections	Not meas.	(c)	--	--	1954	Gravity; concrete dam with 400 feet of pipe to storage tanks.	
14N/1E-28N1 (Sheet 17)	R. L. Chaffey	Branch Creek	Irrig.	6 acres by flooding	Not meas.	Approp.	0.14 cfs	A-645 ^b	Prior 1952	Pump; 5 hp motor with 50 feet of 6-inch pipe.	Former owners: Russell, dead.
14N/1E-33R1 (Sheet 17)	United States Air Force	High Prairie Creek	Domestic	120 persons	16	Approp.	0.0178 cfs	A-1384 ^{2b}	1950	Pumps; 30 hp motor and 2-20 hp motors with 2.3 miles of 3- and 2-inch pipe.	
SALMON RIVER SUBUNIT											
10N/7E-2C1 (Sheet 30)	Homer H. Bennett	Crapo Creek	Irrig. Power	5 acres by flooding 3 kw.	717	Approp.	--	--	Prior 1900	Gravity; log dam 6 feet high, 25 feet long with 0.6 mile of earth ditch, 300 feet of wood flume and 140 feet of 11-inch pipe.	
10N/7E-4P1 (Sheet 30)	Leo and Rose L. Brown	Hammel Creek	Irrig. Power	10 acres by flooding 2 kw.	1,241	Approp.	0.62 cfs 2.00 cfs	A-525 ^b A-814 ^{8b}	1917	Gravity; wood dam 3 feet high, 40 feet long with 0.5 mile of earth ditch and 300 feet of 11-inch pipe.	Former owners: Arthur Johnson, L. H. Thomas.
11N/7E-19H1 (Sheet 27)	Ivan Charles John Martin	Butler Creek	Irrig. Domestic	10 acres by flooding (a)	414	Approp.	--	--	About 1860	Gravity; log dam 3 feet high, 30 feet long with 600 feet of wood flume and 0.3 mile of earth ditch.	Former owner: Butler.

^a See remarks.
^b Information not available.
For lettered footnotes, see last page of table.

TABLE 4 (Continued)

 DESCRIPTIONS OF SURFACE WATER DIVERSIONS IN
 KLAMATH RIVER HYDROGRAPHIC UNIT

Location number and/or Plate 2 sheet number	Diversion name and/or owner	Source	Water use in 1958			Apparent water right			Indicated date of appropriation or first use	Description of diversion system	Remarks
			Purpose	Extent and method of use	Amount diverted in acre-feet	Type	Amount	Reference			
H. B. & M. 11N/7E-35P1 (Sheet 27)	Aubrey Y. Cripps	Crapo Creek	Mining	Placer	1,774	Approp.	14.7 cfs	A-9054 ^b	Prior 1900	Gravity; log dam 10 feet high, 30 feet long with 0.6 mile of earth ditch, 1,000 feet of wood flume and 250 feet of 15-inch pipe.	Former owners: John Bennett, F. H. Shider, Andrew Green.
H. D. B. & M. 39N/11W-28P1 (Sheet 31)	F. H. Buchalla, Frank J. Hartnett	Whites Gulch	Mining	Placer	3,652	Approp.	--	--	Prior 1900	Gravity; log dam 15 feet high, 50 feet long with 1.3 miles of earth ditch and wood flume.	Former owners: Sam Finley, Meyers and Holshour.
			Mining	(*)	(*)	Approp.	--	--	Prior 1900	Gravity; short earth ditch.	Former owner: C. F. Thomain. Amount diverted and extent of use reported under 39N/11W-28P1.
39N/11W-4Q1 (g)	Gene Thomain	Live Yankee Creek	Mining	(*)	(*)	Approp.	--	--	Prior 1900	Gravity; rock and log dam with 0.1 mile of earth ditch and 950 feet of 15- and 12-inch pipe.	Former owner: C. F. Thomain. Amount diverted includes all water from 39N/11W-4Q1.
39N/11W-9B1 (Sheet 31)	Gene Thomain	East Fork Eddy Gulch	Mining	Placer	4,113 [*]	Approp.	--	--	Prior 1900	Gravity; log dam 10 feet high, 50 feet long with 600 feet of 20-inch pipe and 0.5 mile of earth ditch.	Former owners: Finley, John NaPomi. Supplies forest service camp.
40N/11W-13J1 (Sheet 28)	Doug Eastlick	North Fork Salmon River	Indust. Domestic	Lumber mill 6 connections [*]	700	Approp.	--	--	About 1900	Gravity; log dam 6 feet high, 100 feet long with 1.0 mile of earth ditch.	Former owner: Latriela Golden, Chris Berry, George Black.
40N/11W-28P1 (Sheet 28)	Community of Sawyers Bar	North Fork Salmon River	Municip.	40 connections	1,795	Approp.	--	--	Prior 1900	Gravity; concrete dam 10 feet high, 15 feet long with 0.9 mile of earth ditch.	Former owner: Joe Finley.
40N/11W-32E1 (Sheet 28)	United States Klamath National Forest	Jessups Gulch	Power Domestic	2.5 kw. (a)	239	Approp.	0.317 cfs	A-11123 ^b	1937	Gravity; log dam 8 feet high, 27 feet long with 1.0 mile of earth ditch.	Former owner: Martin Olsen.
40N/11W-33P1 (Sheet 28)	Patricia Judge	Eddy Creek	Mining	Placer	675	Approp.	3.0 cfs 3.0 cfs	A-4053 ^b A-5816 ^b	About 1880	Gravity; rock dam with 0.2 mile of earth ditch.	Previously supplied a placer mine.
40N/12W-13J1 (Sheet 28)	John Ahlgren	Little North Fork	Irrig. Stock.	9 acres by flooding	201	Aliparian	--	--	About 1890	Gravity; 0.5 mile of earth ditch to a regulatory reservoir.	
40N/12W-28P1 (Sheet 28)	William D. Sageser	Olsen Creek	Mining Power	Placer 1 kw.	2,570	Approp.	25 cfs	A-9659 ^b	About 1880	Gravity; rock dam with 0.3 mile of earth ditch and 8-inch pipe.	
40N/12W-32Q1 (Sheet 28)	Richard T. Bendl	Big Creek	Power [*] Mining	5 kw. (*)	319	Approp.	3 cfs	A-11476 ^b	1935		

* See remarks.

-- Information not available.

For lettered footnotes, see last page of table.

TABLE 4 (Continued)
DESCRIPTIONS OF SURFACE WATER DIVERSIONS IN
KLAMATH RIVER HYDROGRAPHIC UNIT

Location number and Plot 2 sheet number	Overseer name and/or owner	Source	Water uses in 1958			Apparent water right			Indicated date of appropriation or first use	Description of diversion system	Remarks
			Purpose	Extent and method of use	Amount diverted in acre-feet	Type	Amount	Reference			
SCOTT BAR SUBUNIT											
M D B & N 44N/11W-2B1 (Sheet 16)	William Faulkner	McCarthy Creek	Irrig.	13 acres by sprinkler	Not meas.	Riparian	--	--	Prior 1958	Gravity; rock and timber dam with 0.6 mile of earth ditch and pipe.	Former owner: Elinor S. Gillespie.
44N/11W-2X1 (Sheet 16)	Mrs. George Reeves	Scott River	Irrig.	7 acres by sprinkler	Not meas.	Riparian	--	--	1952	Pump; 3 hp motor with 240 feet of 3-inch pipe.	Former owners: McCarthy, Kells.
44N/11W-3W1 (Sheet 16)	R. S. Smith	Tompkins Creek	Irrig. Domestic Power Stock.	13 acres by flooding (a) 15 kw. 18 head	Not meas.	Riparian	--	--	1878	Gravity; rock dam 1.5 feet high, 40 feet long with 0.6 mile of earth ditch.	Former owners: Thompson, Kleaver.
44N/11W-8R1 (Sheet 16)	Gus Kleaver	Middle Creek	Irrig. Domestic Power	8 acres by flooding 10 connections About 7.5 kw.	Not meas.	(c)	--	--	About 1940	Gravity; rock and log dam with 1.1 miles of earth ditch and 6-inch pipe.	
44N/11W-22R1 (Sheet 16)	United States Klamath National Forest	Kelsey Creek	Domestic Power	20 connections 30 kw.	Not meas.	Approp.	1.2 cfs	A-1206 ^b	1936	Gravity; earth, gravel and log dam with 1.0 mile of earth ditch.	Former owner: Kelsey Creek Improvement Association.
44N/11W-27K1 (Sheet 16)	Brazil and Zella Price	Boulder Creek	Power	35 kw.	Not meas.	Approp.	2.0 cfs	A-8219 ^b	About 1935	Gravity; rock dam with 0.1 mile of 8-inch pipe.	Former owner: Liveasy.
45N/12W-15R1 (Sheet 13)	Harry Krupa B. U. Nowdeha George Skillens	Mill Creek	Irrig. Domestic	6 acres by flooding (a)	434	Riparian	--	--	About 1870	Gravity; rock dam with 0.6 mile of earth ditch.	Former owners: Le Duc, Lighthill, Litchfield.
45N/12W-21E1 (Sheet 13)	Scott Bar Community Water Association	Bill Berry Gulch	Irrig. Domestic	18 acres by flooding 40 persons	606	Approp.	--	--	About 1867	Gravity; rock dam with 0.3 mile of earth ditch.	Former owners: Reynolds Estate, Nesbitt Association.
45N/12W-22D1 (Sheet 13)	Scott Bar Mining Company Joseph Fournier	Mill Creek	Irrig. Mining	6 acres by flooding Ore mill	Not meas.	Approp.	--	--	Prior 1890	Gravity; rock dam with 0.4 mile of earth ditch.	

* See remarks.
-- Information not available.
For lettered footnotes, see last page of table.

TABLE 4 (Continued)
DESCRIPTIONS OF SURFACE WATER DIVERSIONS IN
KLAMATH RIVER HYDROGRAPHIC UNIT

Location number and Plate 2 sheet number	Diversion name and/or owner	Source	Water use in 1956			Apparent water right			Indicated date of appropriation or first use	Description of diversion system	Remarks
			Purpose	Extent and method of use	Amount diverted in acre-feet	Type	Amount	Reference			
SEIAD VALLEY SUBUNIT											
H. D. B. & H. 46N/10W-3N1 (Sheet 9)	V. B. Ward	Buckhorn Creek	Irrig. Stock.	7 acres by flooding ---	712	Riparian	--	--	Prior 1880	Gravity; rock dam with 0.6 mile of earth ditch.	Former owner: Cooney.
46N/10W-3N1 (Sheet 9)	V. B. Ward	Buckhorn Creek	Irrig.	11 acres by flooding	286	Riparian	--	--	Prior 1880	Gravity; rock and timber dam with 0.5 mile of earth ditch.	Former owner: Cooney.
46N/10W-5F1 (Sheet 9)	Asa Robinson	Middle Creek	Irrig.	7 acres by flooding	169	Riparian	--	--	Prior 1900	Gravity; rock dam with 0.5 mile of earth ditch.	Former owners: Ike Gearheart, Jack O'Neil, Gillstrom.
46N/10W-5F2 (Sheet 9)	Asa Robinson	Middle Creek	Irrig.	18 acres by flooding	146	Riparian	--	--	Prior 1900	Gravity; rock and timber dam with 0.6 mile of earth ditch.	Former owners: Ike Gearheart, Jack O'Neil, Gillstrom.
46N/10W-5Q1 (Sheet 9)	Asa Robinson	Middle Creek	Irrig.	28 acres by flooding	302	Riparian	--	--	Prior 1900	Gravity; rock dam with 0.5 mile of earth ditch.	Former owners: Ike Gearheart, Jack O'Neil, Gillstrom.
46N/10W-7Q1 (Sheet 9)	A. A. Morgan	Horse Creek	Irrig.	19 acres by flooding	361	Riparian	--	--	About 1860	Gravity; 0.6 mile of earth ditch.	Former owners: Nathan L. Morgan, M. D. Morgan.
46N/10W-8J1 (Sheet 9)	Fred Hainey	Horse Creek	Irrig.	45 acres by flooding	765	Riparian	--	--	Prior 1890	Gravity; rock dam with 0.9 mile of earth ditch.	Former owners: W. Lichen, James Hainey, Charles Hainey.
46N/10W-9J1 (Sheet 9)	V. B. Ward	Buckhorn Creek	Irrig.	7 acres by flooding	247	Riparian	--	--	Prior 1880	Gravity; log dam with 0.3 mile of earth ditch.	Former owner: Cooney.
46N/10W-9H1 (Sheet 9)	C. Robert Hainey	Buckhorn Creek	Irrig. Stock.	11 acres by flooding 75 head	153	Approp.	--	--	Prior 1890	Gravity; earth and rock dam with 0.2 mile of earth ditch.	Former owners: Conrad Lichen, Lichen Bros., Frank Coffin, John Sylve, Larson and Harnes Dredging Company, Charles W. Hainey.
46N/10W-9H2 (Sheet 9)	C. Robert Hainey	Buckhorn Creek	Irrig.	59 acres by flooding	675	Approp.	--	--	Prior 1890	Gravity; earth and rock dam with 0.6 miles of earth ditch.	Former owners: McCain and Pickens, Conrad Lichen, Lichen Bros., Frank Coffin, Larson and Harnes Dredging Company, Charles W. Hainey.

* See remarks.
-- Information not available.
For lettered footnotes, see last page of table.

TABLE 4 (Continued)
DESCRIPTIONS OF SURFACE WATER DIVERSIONS IN
KLAMATH RIVER HYDROGRAPHIC UNIT

Location number and/or owner sheet number	Division name and/or owner	Source	Water use in 1958			Apparent water right			Indicated date of appropriation or first use	Description of diversion system	Remarks
			Purpose	Extent and method of use	Amount diverted in acre-feet	Type	Amount	Reference			
SEIAD VALLEY SUBUNIT (Continued)											
M. D. B. & M. 46N/10W-15Q1 (Sheet 9)	Chester H. Barton	Klamath River	Irrig.*	(*)	None	Riparian	--	--	1956	Pump; gasoline engine with 240 feet of 3-inch pipe.	Previously irrigated 14 acres. Area was dry farmed in 1958.
46N/10W-16U1 (Sheet 9)	Leon Handley	Spring tributary to Buckhorn Creek	Indust.	Lumber mill	2,202	(c)	--	--	Prior 1958	Gravity; 0.3 mile of earth ditch.	
46N/10W-21Q1 (Sheet 9)	John N. Pickens	Everill Creek	Irrig.	8 acres by flooding	124	Riparian	--	--	Prior 1958	Gravity; 0.4 mile of earth ditch.	Former owners: John T. Everill, Richard Everill.
46N/11W-5B1 (Sheet 9)	W. W. Robinson, Jr.	Seiad Creek	Irrig. Stock.	9 acres by flooding 20 head	439	Adjud.	0.30 cfs	(d)	Prior 1947	Gravity; rock and log dam with 0.4 mile of earth ditch.	Former owners: Chase, W. W. Robinson, Sr.
46N/11W-5F1 (Sheet 9)	R. G. Priddy	Seiad Creek	Irrig. Stock.	20 acres by flooding 65 head	242	Adjud.	0.06 cfs 1.20 cfs	(d)	Prior 1870	Gravity; rock and log dam with 0.8 mile of earth ditch.	Former owners: B. Hainey, Shadburne. Previously irrigated an additional 6 acres.
46N/11W-6Q1 (Sheet 9)	Stanley P. Schwartz	Canyon Creek	Irrig. Stock.	17 acres by flooding* 65 head	76	Adjud.	0.50 cfs	(d)	Prior 1900	Gravity; rock dam with 0.8 mile of earth ditch.	Former owner: B. Hainey.
46N/11W-6Q1 (Sheet 9)	Stanley P. Schwartz	Seiad Creek	Irrig. Stock. Mining	12 acres by flooding 65 head Placer	388	Adjud.	1.20 cfs	(d)	Prior 1900	Gravity; rock dam with 0.2 mile of earth ditch.	Former owner: Phillips. Area irrigated received supplemental supply from 46N/11W-7D2 until 1955.
46N/11W-7D1 (Sheet 9)	Stanley P. Schwartz W. O. Simming	Derkey Creek	Irrig.	15 acres by flooding*	16	Adjud.	1.20 cfs	(d)	Prior 1880	Gravity; earth and rock dam with 0.1 mile of earth ditch.	Former owner: Phillips. Supplemented 46N/11W-7D1 until 1955 when diversion was washed out by flood waters.
46N/11W-7D2 (Sheet 9)	Stanley P. Schwartz W. O. Simming	Seiad Creek	Irrig.*	(*)	None	Adjud	1.20 cfs	(d)	Prior 1880	Gravity; earth and rock dam 1 foot high, 8 feet long with 0.6 mile of earth ditch and wood flume.	Previously irrigated an additional 10 acres.
46N/11W-18E1 (Sheet 9)	H. C. Hammon	Walker Creek	Irrig. Domestic	3 acres by flooding* (a)	341	Approp.	0.67 cfs	A-7377 ^b	Prior 1890	Gravity; concrete and rock dam with 1.0 mile of earth ditch.	

* See remarks.
-- Information not available.
For lettered footnotes, see last page of table.

TABLE 4 (Continued)

DESCRIPTIONS OF SURFACE WATER DIVERSIONS IN
Klamath River Hydrographic Unit

Location number and/or sheet number	Diversion name and/or owner	Source	Water use in 1958			Apparent water right			Indicated date of appropriation or first use	Description of diversion system	Remarks
			Purpose	Extent and method of use	Amount diverted in acre-feet	Type	Amount	Reference			
SEIAD VALLEY SUBUNIT (Continued)											
N D B & N 46N/11W-2841 (Sheet 9)	O'Neill Creek Ditch Neil Hobbs*	O'Neill Creek	Irrig. Domestic	11 acres by flooding (a)	374	Approp.	--	--	Prior 1900	Gravity; earth and rock dam with 0.2 mile of 11-inch pipe and 1.0 mile of earth ditch.	Former owners: Caulkins, Merrill. Other water users: Bud Culvin, A. H. Haas, Harbor, Frank Marlow, Art Price and Charles Rice.
46N/11W-35Q1 (Sheet 9)	Hamburg Ditch Community of Hamburg	Mill Creek	Irrig. Domestic	9 acres by flooding 40 persons	529	Approp.	--	--	Prior 1880	Gravity; wood flume with 1.4 miles of earth ditch.	Former owners: Ed Brown, Sarah Totten.
46N/11W-36R1 (Sheet 9)	Kate Martin Rose R. McCulley	Macke Creek	Irrig.	6 acres by flooding	145	Approp.	--	--	1856	Gravity; earth and rock dam with 0.4 mile of earth ditch.	Former owners: Milligan and McCrary, Mrs. Tom Martin.
46N/12W-12F1 (Sheet 9)	Fred Jensen	Seiad Creek	Irrig. Stock.	27 acres by flooding 60 head	480	Adjud.	2.70 cfe	(d)	About 1880	Gravity; fish screen weir with 180 feet of pipe and 0.4 mile of earth ditch.	Former owner: Reeves.
46N/12W-12H1 (Sheet 9)	Loy Conrad Fred Jensen	Seiad Creek	Irrig. Stock.	25 acres by flooding 14 head	898	Adjud.	0.90 cfe	(d)	About 1880	Gravity; rock dam with 1.4 miles of earth ditch.	Former owner: Phillips.
46N/12W-14C1 (Sheet 9)	Grider Creek Club	Grider Creek	Irrig. Stock.	(*) --	194	Riparian	--	--	About 1875	Gravity; earth and rock dam with 0.2 mile of earth ditch.	Former owners: Grider. Amount diverted irrigated 31 acres jointly with 46N/12W-14E1.
46N/12W-14E1 (Sheet 9)	Grider Creek Club	Grider Creek	Irrig.	(*)	632	Approp.	--	--	About 1875	Gravity; earth and rock dam with 0.5 mile of earth ditch.	Former owner: Grider. Amount diverted irrigated 31 acres jointly with 46N/12W-14C1.
46N/12W-14N1 (Sheet 9)	J. Byer Norman Valpey	Grider Creek	Irrig. Indust. Stock.	26 acres by flooding Lumber mill 80 head	1,906	Approp.	--	--	Prior 1898	Gravity; fish screen weir with 0.9 mile of earth ditch.	Former owner: Grider.
47N/12W-26F1 (Sheet 5)	Benjamin F. Mapleaden St. Francis Invest- ment Company	Buckhorn Creek	Irrig. Stock. Mining	89 acres by flooding and sprinkler 10 head Placer	323	Approp.	--	--	Prior 1900	Gravity; rock dam with 3.6 miles of earth ditch, 1.7 miles of natural channel and 0.5 mile of 8-, 6-, and 4-inch pipe.	Former owner: C. Barton. Area irrigated is located in Beaver Creek Subunit.
47N/11W-32J1 (Sheet 5)	W. W. Robinson, Jr.	Seiad Creek	Irrig.*	(*)	None	Approp.	0.3 cfe	A-10630	1943	Gravity; log dam with 0.4 mile of earth ditch.	Former owner: Chase. Previously irrigated 3 acres.

* See Remarks.

-- Information not available.

For lettered footnotes, see last page of table.

TABLE 4 (Continued)
DESCRIPTIONS OF SURFACE WATER DIVERSIONS IN
KLAMATH RIVER HYDROGRAPHIC UNIT

Location number and/or Plate 2 sheet number	Diversion name and/or owner	Source	Water use in 1958			Apparent water right			Indicated date of appropriation or first use	Description of diversion system	Remarks
			Purpose	Extent and method of use	Amount diverted in acre-feet	Type	Amount	Reference			
H. E. & W. 12N/6E-10F1 (g)	P. P. Dietz	Springs tributary to Klamath River	Domestic Power	(e) 1.2 kw.	37	(c)	--	--	1930	Gravity; rock dam with 0.1 mile of earth ditch and 1,000 feet of 6-, and 2-inch pipe.	Former owner: Jack Forman.
12N/6E-28N1 (Sheet 24)	Luther Hickox	Teneyck Creek	Mining Power	Placer* 5.5 kw.	586	Approp.	--	--	Prior 1914	Gravity; rock dam and wood headworks with 800 feet of 18-inch pipe.	Former owners: Ward, Teneyck, Hall. Received supplemental supply from 12N/6E-28N1 and an unnamed stream which enters above sluice box.
12N/6E-28N1 (Sheet 24)	Luther Hickox	Natuket Creek	Mining	(*)	3,336*	(c)	--	--	1958	Gravity; rock dam with 0.2 mile of earth ditch.	Amount diverted supplemented 12N/6E-28N1.
12N/6E-34J1 (Sheet 24)	Melissa Langford	Herrill Creek	Power Domestic	5 kw. (a)	257	Approp.	--	--	About 1850	Gravity; log dam 6 feet high, 30 feet long with 1.7 miles of earth ditch.	Former owner: Andy Merrill.
13N/6E-5H1 (Sheet 21)	J. B. Ephraim	Tributary to Kennedy Creek	Power	3 kw.	144	Riparian	--	--	1950	Gravity; short wood flume to 450 feet of 6-inch pipe.	Former owner: James.
13N/6E-33G1 (Sheet 21)	L. H. Hayee	Stanshaw Creek	Irrig. Domestic Stock Power	19 acres by flooding 5 connections 20 head 6 kw.	362	Riparian	--	--	About 1800	Gravity; rock and earth dam with 0.7 mile of earth ditch.	Former owner: McMertrie.
13N/6E-33H1 (Sheet 21)	Stanshaw Mines	Stanshaw Creek	Power Domestic	-- (a)	40	Approp.	--	--	About 1890	Gravity; board dam 2 feet high, 8 feet long with 120 feet of 12- and 5-inch pipe.	Former owners: Stanshaw Mining Company, Fontana.
15N/7E-13B1 (Sheet 15)	W. E. Lemon	Malone Creek	Power	5 kw.	269*	Riparian	--	--	1952	Gravity; rock and earth dam with 0.5 mile of earth ditch and 250 feet of 5-inch pipe.	Amount diverted supplemented 15N/7E-13G1.
15N/7E-13G1 (Sheet 15)	W. E. Lemon	Elk Creek	Irrig.	21 acres by flooding*	304	Riparian	--	--	About 1906	Gravity; 0.4 mile of earth ditch.	Former owner: Malone. Area irrigated received supplemental supply from 15N/7E-13B1.
15N/6E-29K1 (Sheet 15)	Ross Y. Kennedy	Stanza Creek	Irrig. Domestic	7 acres by flooding (a)	400	Approp.	--	--	1876	Gravity; earth and rock dam 1 foot high, 8 feet long with 0.2 mile of earth ditch.	Former owners: Fields, Dave Custer.

* See remarks.
-- Information not available.
For lettered footnotes, see last page of table.

TABLE 4 (Continued)
DESCRIPTIONS OF SURFACE WATER DIVERSIONS IN
KLAMATH RIVER HYDROGRAPHIC UNIT

Location number and/or Plate 2 sheet number	Diversion name and/or owner	Source	Water use in 1958			Apparent water right			Indicated date of appropriation or first use	Description of diversion system	Remarks
			Purpose	Extent and method of use	Amount diverted in acre-feet	Type	Amount	Reference			
SOMES BAR SUBUNIT (Continued)											
H B & M 16N/7E-9P1 (Sheet 12)	Hugh Wright	Little Grider Creek	Irrig. Stock Mining	57 acres by flooding and sprinkler ^a 80 head (*)	Not meas.	Approp.	--	--	1875	Gravity; concrete dam 10 feet high, 40 feet long with 1.4 miles of earth ditch.	Former owners: Grider, Davis. Area irrigated received supplemental supply from 16N/7E-15P1 and 16N/7E-16H1. Previously supplied a placer mine.
16N/7E-14M1 (Sheet 12)	Happy Camp Improvement, Inc.	Elk Creek	Municip.	800 persons	299	Approp.	1 cfs 2 cfs 1 cfs	A-8139 ^b A-10427 ^b A-1293 ^b	1956	Pumps; two 20 hp motors with 1.5 miles of 6- and 10-inch pipe.	
16N/7E-14N1 (Sheet 12)	Dorothy Hill	Elk Creek	Irrig. [*]	(*)	None	Approp.	--	--	Prior 1900	Gravity; log dam with 0.6 mile of earth ditch.	Former owners: Efrman, High, McKee Co., Glen Hill. Irrigated 15 acres until 1955.
16N/7E-15P1 (Sheet 12)	Hugh Wright	Springs tributary to Klamath River	Irrig. Stock.	(*) --	Not meas. [*]	Approp.	0.15 cfs	A-9102 ^b	About 1875	Gravity; concrete dam 20 feet high, 20 feet long with 0.2 mile of 4-inch pipe and earth ditch.	Former owners: Grider, Davis, Dissenso. Amount diverted supplemented 16N/7E-9P1.
16N/7E-16N1 (Sheet 12)	Hugh Wright	Springs tributary to Klamath River	Irrig. Domestic	(*) (a)	Not meas. [*]	Approp.	0.13 cfs	A-9096 ^b	About 1875	Gravity; 0.1 mile of earth ditch.	Former owners: Grider, Davis, Dissenso. Amount diverted supplemented 16N/7E-9P1.
16N/8E-32B1 (Sheet 12)	L. R. Smith	East Fork	Domestic Mining Placer Power	(a) Placer 1 kw.	1,275	Approp.	--	--	About 1900	Gravity; 0.4 mile of earth ditch.	Former owners: Welch, Burke.
WEITCHPEC SUBUNIT											
11N/5E-25J1 (Sheet 27)	Orleans Veneer and Lumber Company	Sims Gulch	Domestic	63 connections	Not meas.	(c)	--	--	1955	Gravity; concrete dam 2 feet high, 20 feet long with 0.5 mile of 2-inch pipe.	
11N/6E-20P1 (Sheet 27)	Larry Knudsen	Wilson Creek	Irrig. Stock.	7 acres by flooding 13 head	Not meas.	Riparian	--	--	About 1858	Gravity; rock dam with 0.2 mile of wood flume.	Former owners: Hanns Lawsen, Hanns Knudsen, Walter Knudsen.
11N/6E-20J1 (Sheet 27)	Agnes Boraz	Springs tributary to Whitmore Creek	Power	0.8 kw.	33	Riparian	--	--	Prior 1947	Gravity; 0.2 mile of wood flume, penstock and 6-inch pipe.	Former owner: Bill Adams.
11N/6E-21E1 (Sheet 27)	United States Six Rivers National Forest	Whitmore Creek	Power	10 kw.	345	Approp.	0.8 cfs	A-11692 ^b	1946	Gravity; 0.2 mile of wood flume, penstock and 6-inch pipe	Former owners: Edward Laughlin, Antone Shoenheuffer, Wallace, Williams.
11N/6E-31M1 (Sheet 27)	Orleans Veneer and Lumber Company	Klamath River	Indust.	Lumber mill	3,530	(c)	--	--	1955	Pumps; two diesel engines with 0.3 mile of 14-inch pipe.	

* See remarks.
-- Information not available.
For lettered footnotes, see last page of table.

TABLE 4 (Continued)
DESCRIPTIONS OF SURFACE WATER DIVERSIONS IN
KLAMATH RIVER HYDROGRAPHIC UNIT

Location number and/or plate 2 sheet number	Diversion name and/or owner	Source	Water use in 1938		Amount diverted in acre-feet	Apparent water right		Indicated date of appropriation or first use	Description of diversion system	Remarks
			Purpose	Extent and method of use		Type	Amount			
WEITCHPEC SUBUNIT (Continued)										
11N/6E-32A1 (Sheet 27)	Roy McGain	Perch Creek	Domestic Power	20 persons 75 kw.	1,224*	Riparian	--	1899	Gravity; rock dam 2 feet high, 3 feet long with 4,280 feet of wood flume and 8-inch pipe	Former owners: John A. Pearce, P. L. Young. Amount diverted includes all water from 11N/6E-32A2.
11N/6E-32A2 (Sheet 27)	Roy McGain	Tributary to Perch Creek	Domestic Power	(*) --	(*)	Riparian	--	1899	Gravity; rock dam with wood flume.	Former owners: John A. Pearce, P. L. Young. Amount diverted and extent of use reported under 11N/6E-32A1.
11N/6E-32B1 (Sheet 27)	United States Six Rivers National Forest	Spring tributary to Perch Creek	Domestic	(*)	Not Meas.	Approp.	0.019 cfs 0.006 cfs	1950	Gravity; concrete dam 4 feet high, 30 feet long with 100 feet of 2-inch pipe.	
WOOLEY CREEK SUBUNIT										
(No diversions located in this subunit)										
ADDENDUM TO HORN BROOK SUBUNIT										
47N/4W-18J1 (Sheet 7)	J. N. Foster	Bogus Creek	Irrig.	69 acres by flooding*	Not Meas.	Riparian	--	1890	Gravity; concrete dam 6 feet high, 14 feet long with 0.6 miles of earth ditch.	Supplemented by 47N/4W-18B2.
47N/4W-18M1 (Sheet 7)	J. N. Foster	Bogus Creek	Irrig.	23 acres by flooding*	Not Meas.	Riparian	--	1890	Gravity; concrete dam 4 feet high, 14 feet long with 0.4 miles of earth ditch.	Supplemented by 47N/4W-18B2.
47N/4W-20M1 (Sheet 7)	J. N. Foster	Bogus Creek	Irrig. Stock	23 acres by flooding* 200 head	Not Meas.	Riparian	--	1890	Gravity; wood dam 2 feet high, 20 feet long with 1.5 miles of earth ditch.	Supplemented by 47N/4W-20P1.
47N/6W-17E1 (Sheet 6)	G. M. Grieb	Ditch Creek	Irrig.	17 acres by flooding*	Not Meas.	Riparian	--	1864	Gravity; earthen dam 4 feet high, 20 feet long with 0.1 mile of earth ditch.	Former owner: Spearin. Supplemented by 47N/6W-17E2 and -18B2.
47N/6W-17E2 (Sheet 6)	G. M. Grieb	Ditch Creek	Irrig.	(*)	Not Meas.	Riparian	--	1864	Gravity; direct diversion to a short earth ditch.	Former owner: Spearin. Supplemented 47N/6W-17E1 for use listed thereunder.
47N/6W-17N1 (Sheet 6)	G. M. Grieb	Buffalo Creek	Irrig.	13 acres by flooding*	Not Meas.	Riparian	--	about 1864	Gravity; earth dam 3 feet high, 15 feet long with 0.2 mile of earth ditch.	Former owner: Spearin. Supplemented by 48N/7W-1F1
47N/6W-18J1 (Sheet 6)	G. M. Grieb	Tributary to Cottonwood Creek	Irrig.	33 acres.	Not Meas.	Riparian	--	1864	Gravity; 0.3 mile of earth ditch.	Former owner: Spearin. Previously irrigated an additional 12 acres.
47N/6W-28P1 (Sheet 6)	Black Mountain Ranch	Cottonwood Creek	Irrig.	31 acres by flooding*	Not Meas.	Riparian	--	--	Gravity; 0.7 mile earth ditch.	Former owner: Mareball Horn. Supplemented by 47N/6W-28C1.
48N/7W-22B1 (Sheet 3)	Howar C. Watson	Cottonwood Creek	Irrig.	7 acres by flooding	Not Meas.	Riparian	--	1864	Gravity; 0.5 mile of earth ditch.	Former owner: Reginald Pearson.

c Insufficient information to determine type of water right.

d Seiad Creek Adjudication.

e Siskiyou County Records.

• See Remarks.
-- Information not available.
a Domestic use by less than 5 families or connections.

Records of Surface Water Diversions

Periodic or continuous measurements of surface water diversions were made by the Department of Water Resources during 1958, whenever it was feasible to measure the flows. Substantially all diversion measurements were started by April 1958, prior to the commencement of intensive irrigation, and continued through the irrigation season. Some of the diversions were not located until late in the survey and no measurements or estimates of these were attempted. When feasible, the measurement of a diversion was made at a location above the area of first use and as close to the diversion intake as possible, but below any regulatory spill.

The total amount of water diverted at the 192 diversions for which measurements are reported was about 2,033,000 acre-feet of which 62,300 acre-feet were for irrigation, 1,933,200 acre-feet for power production, 1,500 acre-feet for domestic, 25,200 acre-feet for mining, 2,500 acre-feet for municipal purposes, and 8,300 acre-feet for industrial uses.

Of the 148 irrigation diversions measured during 1958, the records at 135 were judged to be sufficiently complete during the major portion of the irrigation season, April through September, to evaluate irrigation practices. During this period, approximately 43,200 acre-feet were diverted for irrigation of about 4,300 acres, at an overall rate of 10 acre-feet per acre. The average seasonal diversion rates of individual diversion systems varied from less than one to more than 170 acre-feet per acre. These figures included minor domestic and stockwatering uses in conjunction with irrigation.

Diverted quantities were determined by measurement of open channel flow and testing of pumps. Periodic current meter measurement of open channel flows were made during the diversion season to obtain channel ratings. The water stage was recorded either by weekly observations of staff gage or with continuous recorder, from which quantities of flow were calculated. Pumps were similarly rated and quantities of flow were calculated from operation or power records. Power records were obtained for COPCO No. 1 Powerplant, from which quantities of flow were computed.

The results of the diversion measurements are summarized in Table 5. Monthly quantities diverted are shown for each diversion if the record was sufficiently reliable. If the record for a diversion was incomplete or missing, one of the following notations was used:

"---*---"	monthly quantities unreliable, total estimated
superscript "e"	monthly quantity with 10 days or more estimated
"--NR--"	period for which no record was obtained

Index to Surface Water Diversions

For convenience of the reader, an alphabetical index of diversion owners or diversion names, along with the subunit location of each diversion and references to the sheet number of Plate 2 and page numbers of the text or appendixes on which data concerning each appear, is shown in Table 6, page 79.

TABLE 5
MONTHLY RECORDS OF SURFACE WATER DIVERSIONS IN
KLAMATH RIVER HYDROGRAPHIC UNIT, 1958

Location number	Diversion name or owner	Use	Point of measurement or estimate	Method of observation and calculation	Amount diverted, in acrs.-feet												Remarks	
					Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sept	Oct	Nov	Dec		Total
APLEGATE RIVER SUBUNIT																		
(No diversions located in this subunit)																		
BEAVER CREEK SUBUNIT																		
45N/84-111	Charles Coolie	Mining Domestic	0.1 mile below intake	Staff gage and depth-flow relationship	---	---	---	---	---	12	13	12	16	15	21	11	100	Amounts for November and December include an estimated 107 af, 50 and 57 af respectively, which were spilled below point of measurement.
45N/84-10R1	L. B. Jacobson	Industrial Domestic Mining	0.2 mile below intake	Staff gage and depth-flow relationship	---	---	---	---	---	11 ^e	13	17	12	13	14	14	94	
46N/74-2A1	Thomas K. Clyburn	Mining	0.1 mile below intake	Staff gage and depth-flow relationship	---	---	---	---	80 ^e	83	45	12	14	9	20	36	299	
46N/74-21D1	T. C. Woods	Irrigation Stockwatering Domestic	--	Estimate	---	---	---	---	---	---	---	---	---	---	---	---	10	
46N/84-1A1	Emma Pearl Freshour	Irrigation	200 feet below intake	Staff gage and depth-flow relationship	0	0	0	0	40 ^e	44	59	36	32	40 ^e	0	0	251	
46N/84-1F1	Richard Freshour W. M. Rogers	Irrigation	60 feet below intake	Staff gage and depth-flow relationship	0	0	0	0	40 ^e	40 ^e	30 ^e	43	50	39	35	18	289	
46N/84-2A1	Joe Freshour	Irrigation	120 feet below intake	Staff gage and depth-flow relationship	0	0	0	0	70 ^e	80 ^e	70 ^e	80 ^e	80 ^e	51	55	94 ^e	672	
46N/94-3B1	W. M. Rogers	Irrigation	250 feet below intake	Staff gage and depth-flow relationship	---	---	---	---	---	---	60 ^e	30	90	73	65	46	364	
46N/94-3D1	Richard Jones Mason Meek Richard Pack	Irrigation	300 feet below intake	Staff gage and depth-flow relationship	---	---	---	---	---	---	290 ^e	206	130	128	96	0	850	
46N/94-7Q1	St. Francis Investment Company	Irrigation	At sprinklers	Pump test and power record	0	0	0	0	3	1	4	8	7	4	0	0	27	
46N/94-10D1	Richard Jones Mason Meek Richard Pack	Irrigation	50 feet below intake	Staff gage and depth-flow relationship	---	---	---	---	---	---	120 ^e	53	35	45	19	0	272	
46N/94-10D2	W. M. Rogers	Irrigation	100 feet below intake	Staff gage and depth-flow relationship	---	---	---	---	---	---	60 ^e	33	15	3	1	0	112	

* See remarks
e Monthly value estimated
---e--- Diversion estimated for period indicated
---NR--- No record for period indicated

TABLE 5 (Continued)
MONTHLY RECORDS OF SURFACE WATER DIVERSIONS IN
KLAMATH RIVER HYDROGRAPHIC UNIT, 1958

Location number	Diversion name or owner	Use	Point of measurement or estimate	Method of observation and calculation	Amount diverted, in acre-feet												Remarks	
					Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sept	Oct	Nov	Dec		Total
BEAVER CREEK SUBUNIT (Continued)																		
M. D. B. & H. 46N/74-1001	Carl W. Schredier	Irrigation	--	Estimate														10
46N/74-1381	Circle Two Ranch	Irrigation	0.1 mile below intake	Staff gage and depth-flow relationship				NR			170 ^e	140 ^e	147	130	19	0		606
46N/74-1381	Circle Two Ranch	Irrigation	50 feet below intake	Estimate	0	0	0	**	0	0					0	0		100
46N/74-1382	Circle Two Ranch	Irrigation	At intake	Staff gage and depth-flow relationship	0	0	0	120 ^e	210 ^e	190 ^e	298	217	208	226	199	2		1,670 ^e
46N/74-16H1	Bert C. Jackson	Irrigation	0.5 mile below intake	Staff gage and depth-flow relationship				NR		150 ^u	137	122	104	103	99	103		818 ^e
46N/74-23L1	Elmer and Frank Lang	Irrigation	100 feet below intake	Staff gage and depth-flow relationship				NR			30 ^e	30	39	39	42	40		220
46N/74-24D1	Circle Two Ranch	Irrigation	75 feet below intake	Estimate	0	0	0	0	0						0	0		70
46N/74-24L1	Circle Two Ranch	Irrigation	400 feet below intake	Estimate	0	0	0	0	0	0					0	0		110
46N/74-24E2	Circle Two Ranch	Irrigation	--	Estimate											0	0		110
46N/74-24F1	Circle Two Ranch	Irrigation	--	Estimate											0	0		30
46N/74-24F2	Circle Two Ranch	Irrigation	--	Estimate	0	0	0								0	0		20
46N/74-24K1	Circle Two Ranch	Irrigation	200 feet below intake	Staff gage and depth-flow relationship	0	0	0	20 ^e	0	0	20 ^e	25	14	20	0	0		99
46N/74-24L1	Circle Two Ranch	Irrigation	150 feet below intake	Estimate	0	0	0	**	0	0					0	0		90
46N/74-25A1	Circle Two Ranch	Irrigation	0.1 mile below intake	Estimate	0	0	0	**	0	0					0	0		30

* See remarks
e Monthly value estimated
--e-- Diversion estimated for period indicated
--NR-- No record for period indicated

TABLE 5 (Continued)

MONTHLY RECORDS OF SURFACE WATER DIVERSIONS IN
KLAMATH RIVER HYDROGRAPHIC UNIT, 1958

Location number	Diversion name or owner	Use	Point of measurement or estimate	Method of observation and calculation	Amount diverted, in acre-feet												Remarks		
					Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sept	Oct	Nov	Dec		Total	
BEAVER CREEK SUBUNIT (Continued)																			
M. D. B. & M. 46N/9W-26B1	Elmer and Frank Lang	Irrigation	300 feet below intake	Staff gage and depth-flow relationship								20°	41	54	56	51	50	272	
46N/9W-26X1	Elmer and Frank Lang	Irrigation	100 feet below intake	Staff gage and depth-flow relationship								10°	23	19	20	20	14	106	
46N/9W-28E1	Kenneth R. Duncan	Domestic	300 feet below intake	Staff gage and depth-flow relationship								30°	26	26	15	21	14	132	
46N/9W-33F1	Virgil Roberts	Irrigation	400 feet below intake	Staff gage and depth-flow relationship								50°	59	47	48°	29*	0	233	Amounts for October and November spilled back to creek.
47N/8W-31F1	Quigley-Lichens Ditch	Irrigation Domestic	400 feet below intake	Water-stage recorder and depth-flow relationship	(38)	(0)	(0)		24.6	47.6	557	782	579	450	147	70	3,307* (38)	Ditch picked up an estimated 0.2 cfs of continuous flow from Fish Gauch about 0.5 mile below point of measurement which was not included in total. 1959 records in parentheses.	
47N/8W-35X1	Joe Freshour	Irrigation Stockwatering	30 feet below intake	Staff gage and depth-flow relationship	0	0	0	0	90°	90°	90°	80°	89	86	91	94*	94*	804	Amounts for November and December include an estimated 130 af, 67 and 63 af respectively, which were spilled below point of measurement.
CECILVILLE SUBUNIT																			
10W/8E-31G1	Winnie Garsner Ted H. Finn Julia Linderman	Domestic Power	0.5 mile below intake	Staff gage and depth-flow relationship	300°	270°	300°	290°	300°	300°	379°	383	298	287	287	293	3,687*	An estimated 60 af transportation loss above gage not included in total.	
37N/10W-4N1	William S. Johnson	Irrigation Stockwatering	--	Estimate													160		
37N/10W-5D1	Jordan Ditch	Irrigation Domestic Stockwatering Power	1.2 miles below intake	Staff gage and depth-flow relationship	150°	140°	150°	150°	150°	150°	153°	157	147	156	161	127	1,791*	Total amount includes 427 af spilled to Quass Ditch (38N/10W-32H1). An estimated 70 af transportation loss above gage not included in total.	
37N/11W-3N1	Dennis Moody	Irrigation Mining	0.1 mile below intake	Staff gage and depth-flow relationship	0	0	0	0	0	0	10°	24	14	2	0	17	67	1959 records in parentheses.	
					(344)	(311)											(655)		

* See remarks

° Monthly value estimated

---°--- Diversion estimated for period indicated

---NR--- No record for period indicated

TABLE 5 (Continued)
MONTHLY RECORDS OF SURFACE WATER DIVERSIONS IN
KLAMATH RIVER HYDROGRAPHIC UNIT, 1958

Location number	Diversion name or owner	Uses	Point of measurement or estimate	Method of observation and calculation	Amount diverted, in acre-feet												Remarks								
					Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sept	Oct	Nov	Dec		Total							
CECILVILLE SUBUNIT (Continued)																									
37N/11W-941 M. E. S. M.	Dennis Moody	Irrigation Mining	0.1 mile below intake	Staff gage and depth-flow relationship	0	0	0	0	20 ^e	20 ^e	20 ^e	18	18	17	7	4	124								
37N/11W-12N1	Edward A. McElroom	Mining Domestic	200 feet below intake in penstock	Price meter in penstock and depth-flow relationship	138	125	789	1,282	1,345	708	139	138	134	138	134	0	5,050								
37N/11W-13W1 37N/11W-23G1	E. W. Sawyer	Power	Near intake	Nozzle rating and depth-flow relationship	120	108	120	116	120	116	120	120	116	120	116	120	1,412								
38N/10W-32H1	Quass Ditch	Irrigation Stockwatering	2.5 miles below intake	Staff gage and depth-flow relationship	0	0	0	80 ^e	80 ^e	70 ^e	28	39	0	13	0	0	310 ^e	Total amount does not include an additional 427 af received from Jordan Ditch (37N/10W-5D1).							
38N/11W-17L1	United States Klamath National Forest	Irrigation Domestic	0.3 mile below intake	Staff gage and depth-flow relationship	-----NR-----												40 ^e	43	21	21	58	40 ^e	269		
38N/11W-21A1	Nestor A. Westover	Power	At intake	Staff gage and depth-flow relationship	260 ^e	240 ^e	270 ^e	260 ^e	260 ^e	260 ^e	230 ^e	109	147	157	238	230 ^e	2,661								
38N/11W-29D1	Shasta Mining Co.	Irrigation Stockwatering	0.3 mile below intake	Staff gage and depth-flow relationship	-----NR-----												30 ^e	64	31	29	27	86	60 ^e	327 ^e	An estimated 30 af transpor- tation loss not included in total.
38N/11W-29Q1	Olyn Gould	Power Domestic	At nozzle	Nozzle rating	16	15	17	16	17	16	17	17	16	17	16	16	196 ^e	Small domestic use not included in total.							
38N/11W-30H1	Mrs. John N. McElroom	Irrigation	0.2 mile below intake	Staff gage and depth-flow relationship	60 ^e	50 ^e	60 ^e	60 ^e	150 ^e	140 ^e	124	72	37	38	46	40 ^e	877								
38N/11W-30M1	Jack Boaz Clarence H. Nance	Mining Domestic	At nozzle	Nozzle rating	43	39	44	21	-----NR-----												147 ^e	Small domestic use not included in total.			
39N/10W-15B1	Glen Thornton	Mining	At nozzle	Nozzle rating	0	0	0	274	283	274	136	0	0	0	0	0	967								
39N/10W-31D1	Katherine C. George	Irrigation Mining Domestic	1.5 miles below intake	Staff gage and depth-flow relationship	120 ^e	110 ^e	120 ^e	120 ^e	120 ^e	430 ^e	328	227	95	97	104	120 ^e	1,991								
39N/12W-17S1	George H. and Robert G. Odifrey	Irrigation Stockwatering	At area of use	Sprinkler test and operation record	0	0	60 ^e	60 ^e	60 ^e	30 ^e	7	7	6	7	0	0	237								

* See remarks
e Monthly value estimated
---e--- Diversion estimated for period indicated
--NR-- No record for period indicated

TABLE 5 (Continued)
MONTHLY RECORDS OF SURFACE WATER DIVERSIONS IN
KLAMATH RIVER HYDROGRAPHIC UNIT, 1958

Location number	Diversion name or owner	Use	Point of measurement or estimate	Method of observation and calculation	Amount diverted, in acre-feet												Remarks	
					Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sept	Oct	Nov	Dec		Total
COPCO LAKE SUBUNIT																		
47N/7E-3N	E. G. Lemas	Irrigation	At intake	Staff gage and depth-flow relationship							31	16	17	19	18	19	120	
48N/L-2-G	Warren Lemay	Irrigation	0.3 mile below intake	Staff gage and depth-flow relationship	0	0	0	0	0	0	0	0	32	32	0	0	64	
48N/L-29-1	Copco Lake	Power	(*)	(*)	193,391	185,413	187,767	151,555	123,063	123,063	122,602	125,617	178,507	192,717	192,717	1,923,118	Record obtained from the California-Oregon Power Co.	
48N/5N-25A	California-Oregon Power Company	Irrigation	0.5 mile below intake	Estimate								0	0	0	0	0	40	
HAPPY CAMP SUBUNIT																		
48N/7E-1M1	Siskiyou Mills	Industrial	At pump	Pump test and power record	14	0	0	68	69	127	286	226	205	180	176	130	1,461	
48N/7E-2F1	Keystone Ditch	Industrial Domestic	0.2 mile below intake	Staff gage and depth-flow relationship							13	17	11	11	7	1	60	
48N/8E-17F1	Prentiss C. Hale	Irrigation Stockwatering	400 feet below intake	Staff gage and depth-flow relationship	0	0	0	0	40	40	50	46	44	47	13	0	240	
47N/8E-10R1	Mrs. Marion M. Kniffen	Mining	300 feet below intake	Estimate													10	
47N/7E-4-1	David M. Huey	Irrigation Domestic Power	0.1 mile below intake	Staff gage and depth-flow relationship							190	173	200	210	204	167	1,144	
47N/7E-4F1	Paul G. Beck Charles Hockaday	Irrigation Domestic	25 feet below intake	Staff gage and depth-flow relationship							50	66	63	67	69	60	375	
47N/7E-5L1	Alice Sedros	Irrigation	300 feet below intake	Staff gage and depth-flow relationship							12	13	15	14	27	30	111	
47N/7E-9E1	Alice Sedros	Irrigation Domestic	75 feet below intake	Staff gage and depth-flow relationship							80	107	91	31	53	28	390	
47N/7E-9F2	Lee C. Waddell	Irrigation	200 feet below intake	Staff gage and depth-flow relationship							55	67	50	61	75	51	359	

* See remarks
e Monthly value estimated
- - - - - Diversion estimated for period indicated
- N.R. - No record for period indicated

TABLE 5 (Continued)
MONTHLY RECORDS OF SURFACE WATER DIVERSIONS IN
KLAMATH RIVER HYDROGRAPHIC UNIT, 1958

Location number	Diversion name or owner	Use	Point of measurement or estimate	Method of observation and calculation	Amount diverted, in acre-feet												Remarks
					Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sept	Oct	Nov	Dec	
<u>HAPPY CAMP SUBUNIT (Continued)</u>																	
<u>H. B. & M.</u> 17N/7E-923	Gay Head	Irrigation	200 feet below intake	Staff gage and depth-flow relationship							216	204	146	112	5	6	689
17N/7E-924	Gay Head	Irrigation	300 feet below intake	Staff gage and depth-flow relationship							290	289	118	161	2	0	860
17N/7E-15N1 17N/7E-1642	Thomas Roberts	Irrigation Industrial	400 feet below intake	Staff gage and depth-flow relationship							130	158	108	84	47	53	580
17N/7E-2231	Aubrey A. Hall	Domestic Stockwatering	400 feet below intake	Staff gage and depth-flow relationship							16	22	13	1	1	1	54
17N/7E-2651	Aubrey A. Hall	Irrigation	At pump	Pump test and operation record	0	0	0	0	0	0	3	3	3	2	0	0	11
17N/7E-34F1	Edward Head	Irrigation Domestic	0.5 mile below intake	Staff gage and depth-flow relationship						20°	17	14	18	18	24	22	133
18N/6S-2511	Duane H. Curry	Mining Domestic Power	0.1 mile below intake	Staff gage and depth-flow relationship							184	154	57	27	115	133	670
18N/7E-3231	W. H. Bussert	Irrigation Domestic Stockwatering	400 feet below intake	Staff gage and depth-flow relationship							35	16	8	6	9	6	80
<u>M. D. B. & M.</u> 46N/12W-30F1	Holly Thomas	Irrigation Domestic	400 feet below intake	Staff gage and depth-flow relationship							12	15	15	12	2	0	56
47N/12W-3211	R. T. Hamer	Irrigation Mining	100 feet below intake	Staff gage and depth-flow relationship						90°	124	127	111	100	120	108	780
47N/12W-32P1	Chester H. Barton	Irrigation	300 feet below intake	Staff gage and depth-flow relationship						70°	88	71	61	39	35	10	374
<u>HORN BROOK SUBUNIT</u>																	
46S/4W-15N1	Etta O. Eneale	Irrigation	3.8 miles below intake	Staff gage and depth-flow relationship						120°	64	21	18	19	10	5	257
46N/4W-28J1	R. W. Thomason	Irrigation	150 feet below intake	Staff gage and depth-flow relationship						20°	27	21	20	21	21	21	151

* See remarks
e Monthly value estimated
---e--- Diversion estimated for period indicated
--NR-- No record for period indicated

TABLE 5 (Continued)

MONTHLY RECORDS OF SURFACE WATER DIVERSIONS IN
KLAMATH RIVER HYDROGRAPHIC UNIT, 1958

Location number	Diversion name or owner	Use	Point of measurement or estimate	Method of observation and calculation	Amount diverted, in acre-feet												Remarks
					Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sept	Oct	Nov	Dec	
HORN BROOK SUBUNIT (Continued)																	
M.D.B. & M. 46N/4W-33DL	Anthony J. Sylva	Irrigation	50 feet below intake	Staff gage and depth-flow relationship	NR				20°	20°	6	3	0	1	8	10	68
46N/5W-14QL	Russell Frederick	Irrigation	100 feet below intake	Staff gage and depth-flow relationship	NR						10°	13	3	11	6	11	64
46N/5W-22ML	Benjamin H. Hager	Irrigation	0.1 mile below intake	Staff gage and depth-flow relationship	NR				300°	310°	270°	141	20	0	0	0	1,042
46N/5W-28RL	Clarence Kuck	Irrigation	—	Estimate													20
47N/4W-7JL	Cheesbrough W. E. McKenzie	Irrigation Stockwatering	30 feet below intake	Staff gage and depth-flow relationship	NR						50°	83	150	82	18	3	388
47N/4W-90L	Silva-Linich Ditch	Irrigation Stockwatering Power	100 feet below intake	Staff gage and depth-flow relationship	NR						250°	245	243	234	228	215	222 1,637
47N/4W-188L	James Ditch	Irrigation Stockwatering Power	150 feet below intake	Staff gage and depth-flow relationship	0	0	0	NR			340°	358	312	365	38	61	55 1,529
47N/4W-189L	Elsie Bloomingcamp J. N. Foster	Irrigation Domestic Power	20 feet below intake	Staff gage and depth-flow relationship				NR			140°	61	108	91	112	18	8 538
47N/4W-189L	Cheesbrough W. E. McKenzie	Irrigation Stockwatering Domestic	0.1 mile below intake	Staff gage and depth-flow relationship				NR			130°	124	134	113	113	110	106 830
47N/4W-189L	Cheesbrough J. N. Foster W. E. McKenzie	Irrigation Stockwatering Domestic	0.2 mile below intake	Staff gage and depth-flow relationship				NR			70°	76	72	79	77	58	50 482
47N/4W-189L	John B. Fitzgerald	Irrigation Stockwatering Domestic	400 feet below intake	Staff gage and depth-flow relationship				NR			160°	110	180	204	112	0	0 766
47N/4W-18QL	Elsie Bloomingcamp J. N. Foster	Irrigation Stockwatering	100 feet below intake	Staff gage and depth-flow relationship				NR			60°	52	186	75	116	0	0 489
47N/4W-20PL	J. N. Foster	Irrigation Stockwatering	0.2 mile below intake	Staff gage and depth-flow relationship	0	0	0	NR			20°	75	135	116	103	2	1 452
47N/5W-13QL	L. F. Smud	Irrigation Domestic	400 feet below intake	Staff gage and depth-flow relationship				NR			20°	29	27	28	23	16	16 159

* See remarks

e Monthly value estimated

---e--- Diversion estimated for period indicated

---NR--- No record for period indicated

TABLE 5 (Continued)
MONTHLY RECORDS OF SURFACE WATER DIVERSIONS IN
KLAMATH RIVER HYDROGRAPHIC UNIT, 1958

Location number	Diversion name or owner	Use	Point of measurement or estimate	Method of observation and calculation	Amount diverted, in acre-feet												Remarks	
					Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sept	Oct	Nov	Dec		Total
HORN BROOK SUBUNIT (Continued)																		
M. D. B. & M. 4.7N/54-16D1	California-Oregon Power Company	Irrigation	25 feet below intake	Staff gage and depth-flow relationship	0	0	0	40 ^e	40 ^e	110 ^e	75	47	69	76	30 ^e	0	557	10
4.7N/54-17M1	James Liskey	Irrigation	--	Estimate	----- ⁸⁸ -----													
4.7N/54-19A1	Lauran Paine	Irrigation	At pump	Pump test and power record	0	0	0	0	0	0	8	6	5	0	0	0	19	
4.7N/54-19J1	Lauran Paine	Irrigation	At pump	Pump test and power record	0	0	0	0	2	12	11	28	23	0	0	0	76	
4.7N/54-19P1	Kenneth Houston	Irrigation	At pump	Pump test and power record	0	0	0	22	42	41	28	1	0	0	0	0	134	
4.7N/54-30D1	Lem LeRoy Tull	Irrigation	At pump	Pump test and power record	0	0	0	9	15	21	22	8	10	9	0	0	94	
4.7N/54-7E1	L. G. Robertson	Irrigation Stockwatering	150 feet below intake	Staff gage and depth-flow relationship	-----NR-----				90 ^e	110 ^e	36	34	50	108	83	3	514	
4.7N/54-17F1	Ellie Ditch	Irrigation Stockwatering	80 feet below intake	Staff gage and depth-flow relationship	-----NR-----				250 ^e	163	242	111	106	192	39	54	1,157	
4.7N/54-17Q1	C. F. Spearin	Irrigation	450 feet below intake	Staff gage and depth-flow relationship	-----NR-----				60 ^e	66	36	71	23	0	0	0	256	
4.7N/54-17M	Bill Rogers Alfred W. and C. F. Spearin	Irrigation Stockwatering	0.5 mile below intake	Staff gage and depth-flow relationship	-----NR-----				80 ^e	40 ^e	71	36	0	0	0	0	227	
4.7N/54-18E1	Bob Cummine	Irrigation	200 feet below intake	Staff gage and depth-flow relationship	-----NR-----				20 ^e 6 ^e				0	0	0	0	26	Diversion dam washed out July 20.
4.7N/54-18G1	L. G. Robertson	Irrigation Stockwatering	400 feet below intake	Staff gage and depth-flow relationship	0	0	0	0	40 ^e	21	14	25	21	39	45	18	223	Total amount includes some water received from Cottonwood Irrigation and Mining Company ditch.
4.7N/54-18Q2	L. G. Robertson	Irrigation Stockwatering	150 feet below intake	Staff gage and depth-flow relationship	-----NR-----				0 3 3 3				5	28 ²	20 ^e	79	Amounts for November and December include an estimated 12 af spilled below gage.	
4.7N/54-19P1	Elmer and Robert Julien	Irrigation	400 feet below intake	Staff gage and depth-flow relationship	(8)	(9)	(2)	-----NR-----									(19)	1959 records in parentheses.
					0	0	0	0	30 ^e	20 ^e	10 ^e	13	13	24	27	30 ^e	167	Total amount includes an estimated 70 af spilled below gage.

* See remarks
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TABLE 5 (Continued)
MONTHLY RECORDS OF SURFACE WATER DIVERSIONS IN
KLAMATH RIVER HYDROGRAPHIC UNIT, 1958

Location number	Diversion name or owner	Use	Point of measurement or estimate	Method of observation and calculation	Amount diverted, in acre-feet												Remarks				
					Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sept	Oct	Nov	Dec		Total			
HORN BROOK SUBUNIT (Continued)																					
M. D. B. & N. 47N/64-20E1	Hornbrook Water Company	Municipal	300 feet below intake	Staff gage and depth-flow relationship	50°	50°	36	61	58	48	43	37	18	16	17	26	460				
47N/64-20H1	Black Mountain Ranch	Irrigation	0.2 mile below intake	Staff gage and depth-flow relationship	-----NR-----												355	Total amount includes some water picked up from Rancheria Gulch.			
47N/64-21M1	Black Mountain Ranch Alfred W. Spearin	Irrigation	0.1 mile below intake	Staff gage and depth-flow relationship	-----NR-----												1,147				
47N/64-25D1	Alfred A. Protzman	Irrigation Stockwatering	At pump	Pump test and power record	0	0	0	0	53	36	36	52	7	15	0	0	199				
47N/64-25H1	Alfred A. Protzman	Irrigation	At pump	Pump test and power record	0	0	0	0	23	15	17	10	29	0	0	0	94				
47N/64-27M1	Black Mountain Ranch	Irrigation	At pump	Pump test and power record	0	0	0	0	0	0	30	49	7	0	0	0	86				
47N/64-27H2	Black Mountain Ranch	Irrigation	At pump	Pump test and power record	0	0	0	0	0	0	32	51	8	0	0	0	91				
47N/64-28C1	Black Mountain Ranch	Irrigation	0.5 mile below intake	Staff gage and depth-flow relationship	0	0	0	0	110°	105	14	0	0	0	0	0	229				
47N/64-29E1	Fred Dragoo	Irrigation Stockwatering	50 feet below intake	Staff gage and depth-flow relationship	-----NR-----												7				
47N/64-31D1	George E. Calliach	Irrigation	At pumps	Pump tests, power record and operation record	0	0	0	19	23	21	31	26	19	16	0	0	155	Total amount is for two pumps.			
47N/64-36A1	Louie Freitas	Irrigation Stockwatering	0.1 mile below intake	Staff gage and depth-flow relationship	-----NR-----												53				
47N/74-1F1	Cottonwood Irrigation and Mining Company	Irrigation	400 feet below intake	Water stage recorder and depth-flow relationship	0	0	0	0	491	415	417	252	194	163	139	141	2,349	1959 records in parentheses.			
47N/74-1F2	John Sylva	Irrigation Stockwatering	400 feet below intake	Staff gage and depth-flow relationship	(73)	(56)	(8)	-----NR-----												(137)	
47N/74-1G1	Herman Kurt	Irrigation Stockwatering	100 feet below intake	Staff gage and depth-flow relationship	-----NR-----												424				

• See remarks
e Monthly value estimated
---e--- Diversion estimated for period indicated
--NR-- No record for period indicated

TABLE 5 (Continued)
MONTHLY RECORDS OF SURFACE WATER DIVERSIONS IN
KLAMATH RIVER HYDROGRAPHIC UNIT, 1958

Location number	Diversion name or owner	Use	Point of measurement or estimate	Method of observation and calculation	Amount diverted, in acre-feet												Remarks	
					Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sept	Oct	Nov	Dec		Total
<u>HORN BROOK SUBUNIT (Continued)</u>																		
<u>M. D. B. & M.</u> 47N/74-12H1	S. D. Haworth	Irrigation	400 feet below intake	Staff gage and depth-flow relationship	0	0	0	0	10 ^e	10 ^e	5	0	0	0	0	0	25	Total amount includes some water imported from Cottonwood Creek.
47N/74-12H2	S. D. Haworth	Irrigation	400 feet below intake	Staff gage and depth-flow relationship	0	0	0	0	30 ^e	9	2	1	0	0	0	0 ^e	32	
47N/74-24C1	Fred Draggoo Allen Jespersen	Irrigation Stockwatering	200 feet below intake	Staff gage and depth-flow relationship	0	0	0	0	140 ^e	170 ^e	182	115	78	81	46	16	828	
48N/54-21N1	Doan Madero	Irrigation	0.5 mile below intake	Staff gage and depth-flow relationship	-----NR-----					20 ^e	14	24	6	0	0	0	64	
48N/64-31N1	Lawrence Lemos	Irrigation	150 feet below intake	Staff gage and depth-flow relationship	0	0	0	50 ^e	50 ^e	19	9	8	12	13	5	0	166	
48N/64-32N1	Lawrence Lemos	Irrigation Stockwatering	0.1 mile below intake	Staff gage and depth-flow relationship	0	0	0	40 ^e	70 ^e	35	23	13	10 ^e	0 ^e	0	0	191	
48N/74-15C1	F. L. Burns	Irrigation Stockwatering	300 feet below intake	Staff gage and depth-flow relationship	0	0	0	0	160 ^e	55	101	27	18	27	0	0	388	
48N/74-15D2	F. L. Burns	Irrigation	150 feet below intake	Staff gage and depth-flow relationship	0	0	0	0	240 ^e	123	77	195	137	57	0	0	829	
48N/74-15D1	F. L. Burns	Irrigation	30 feet below intake	Staff gage and depth-flow relationship	0	0	0	0	110 ^e	61	27	21	51	45	0	0	315	
48N/74-21C1	F. L. Burns	Irrigation Stockwatering	0.6 mile below intake	Staff gage and depth-flow relationship	0	0	0	0	100 ^e	86	55	30	20	13	0	0	304	
48N/74-24F1	Walter Wreden	Irrigation Stockwatering	0.3 mile below intake	Staff gage and depth-flow relationship	0	0	0	0	200 ^e	189	130	69	64	46	24	16	738	
<u>KLAMATH GLEN SUBUNIT</u>																		
<u>H. B. & M.</u> 10N/4E-32C1	William Bow	Irrigation	--	Estimate	-----**-----												280	
10N/4E-32E1	Sam Jones	Power	0.1 mile below intake	Nozzle rating	41	37	41	40	41	40	41	41	40	41	40	42	485	

• See remarks
• Density value estimated
---•--- Diversion estimated for period indicated
---NR--- No record for period indicated

TABLE 5 (Continued)
MONTHLY RECORDS OF SURFACE WATER DIVERSIONS IN
KLAMATH RIVER HYDROGRAPHIC UNIT, 1958

Location number	Diversion name or owner	Use	Point of measurement or estimate	Method of observation and calculation	Amount diverted, in acre-feet												Remarks			
					Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sept	Oct	Nov	Dec		Total		
<u>KLAMATH GLEN SUBUNIT (Continued)</u>																				
H. B. & N. 10N/AE-32F1	Homar Cooper	Irrigation Power	275 feet below intake	Staff gage and depth-flow relationship	50°	40°	40°	40°	50°	40°	63	81	58	40	36	38	576	Record obtained from Kingsley Field Installation Superintendent.		
	Simmons Lumber Company	Industrial	At nozzle	Nozzle rating	10	10	20	21	20	20	21	20	20	22	17	11	212			
	LAN/1E-33B1	United States Air Force	Domestic	(*)	(*)	1	1	1	1	2	2	1	1	1	2	2	1		16*	
<u>SALMON RIVER SUBUNIT</u>																				
10N/7E-2C1	Homar H. Bennett	Irrigation Power	At nozzle	Nozzle rating	60	55	61	59	61	59	61	61	59	61	59	61	717			
10N/7E-4F1	Leo and Rose L. Brown	Irrigation Power	0.7 mile below intake	Staff gage and depth-flow relationship	120	108	120	116	120	120	150	93	55	46	69	124	1,241			
11N/7E-19N1	Ivan Charles John Martin	Irrigation Domestic	500 feet below intake	Operation record and depth-flow relationship	15	13	15	15	59	57	59	59	57	36	14	15	414			
11N/7E-35F1	Aubrey Y. Griego	Mining	At intake	Operation record and depth-flow relationship	150	136	151	146	151	146	150	151	146	151	146	150	1,774			
<u>SAWYERS BAR SUBUNIT</u>																				
H. B. & N. 39N/11W-2B1	F. H. Buchella Frank J. Hartnett	Mining	At nozzle	Nozzle rating	206	576	638	617	637	617	283	0	0	0	0	0	78	Total amount includes some water received from County ditch.		
	Gene Thomas	Mining	At nozzle	Nozzle rating	650	598	650	650	650	630	315	0	0	0	0	0	4,113			
40N/11W-13A1	Doug Eastlick	Industrial Domestic	--	Estimate	0	0	-----										0	0	0	700
40N/11W-28F1	Community of Sawyers Bar	Municipal	0.5 mile below intake	Staff gage and depth-flow relationship	160°	150°	160°	160°	160°	160°	146°	157	147	144	124	127	1,795			

* See remarks
° Monthly value estimated
---°--- Overrun estimated for period indicated
--N R-- No record for period indicated

TABLE 5 (Continued)
MONTHLY RECORDS OF SURFACE WATER DIVERSIONS IN
KLAMATH RIVER HYDROGRAPHIC UNIT, 1958

Location number	Diversion name or owner	Use	Point of measurement or estimate	Method of observation and calculation	Amount diverted, in acre-feet												Remarks	
					Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sept	Oct	Nov	Dec		Total
SAWIERS BAR SUBUNIT (Continued)																		
40N/11W-32E1 M.D.B. & M.	United States Klamath National Forest	Power Domestic	At nozzle	Nozzle rating	20	19	20	20	20	20	20	20	20	20	20	20	239 ^e	Small domestic use not included in total.
40N/11W-33P1	Patricia Judge	Mining	At nozzle	Nozzle rating	0	157	34.9	16.9	0	0	0	0	0	0	0	0	675	
40N/12W-13L1	John Ahlgren	Irrigation Stockwatering	0.1 mile below intake	Staff gage and depth-flow relationship	20 ^e	20 ^e	20 ^e	20 ^e	20 ^e	10 ^e	21	20	16	10	8	16	201	
40N/12W-28F1	William O. Sagsier	Mining Power	At nozzle	Nozzle rating	419	379	419	406	419	232	124	15	14	15	14	114	2,570 ^e	Small domestic use not included in total.
40N/12W-32C1	Richard T. Bendl	Power	At nozzle	Nozzle rating	28	25	27	26	27	26	27	27	26	27	26	27	319 ^e	Total amount does not include an estimated 1.0 cfs continuously spilled at head of penstock.
SCOTT BAR SUBUNIT																		
45N/10W-15d1	Harry Krupa B. U. Nwdecha George Skilleas	Irrigation Domestic	50 feet below intake	Staff gage and depth-flow relationship	-----NR-----												434	
45N/10W-21E1	Scott Bar Community Water Association	Irrigation Domestic	80 feet below intake	Staff gage and depth-flow relationship	-----NR-----												606	
SELIAD VALLEY SUBUNIT																		
46N/10W-3W1	V. B. Ward	Irrigation Stockwatering	150 feet below intake	Staff gage and depth-flow relationship	-----NR-----												712	
46N/10W-3N1	V. B. Ward	Irrigation	0.1 mile below intake	Staff gage and depth-flow relationship	-----NR-----												286	
46N/10W-5F1	Asa Robinson	Irrigation	200 feet below intake	Staff gage and depth-flow relationship	-----NR-----												169	
46N/10W-5F2	Asa Robinson	Irrigation	250 feet below intake	Staff gage and depth-flow relationship	-----NR-----												146	
46N/10W-5Q1	Asa Robinson	Irrigation	150 feet below intake	Staff gage and depth-flow relationship	-----NR-----												302	

* See report
e Monthly value estimated
---e--- District estimated for period indicated
---NR--- No record for period indicated

TABLE 5 (Continued)

MONTHLY RECORDS OF SURFACE WATER DIVERSIONS IN
KLAMATH RIVER HYDROGRAPHIC UNIT, 1958

Location number	Diversion name or owner	Use	Point of measurement or estimate	Method of observation and calculation	Amount diverted, in acre-feet												Remarks	
					Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sept	Oct	Nov	Dec		Total
SEIAD VALLEY SUBUNIT (Continued)																		
H B & M 46N/10W-701	A. A. Morgan	Irrigation	200 feet below intake	Staff gage and depth-flow relationship	-----NR-----	-----	-----	-----	-----	-----	64	96	67	40	56	38	361	
46N/10W-811	Fred Hainey	Irrigation	0.1 mile below intake	Staff gage and depth-flow relationship	-----NR-----	-----	-----	-----	-----	396	185	128	32	12	12	12	765	
46N/10W-911	V. B. Ward	Irrigation	30 feet below intake	Staff gage and depth-flow relationship	0	0	0	30 ^a	40 ^a	40 ^a	41	43	32	21	0	0	247	
46N/10W-911	C. Robert Hainey	Irrigation Stockwatering	100 feet below intake	Staff gage and depth-flow relationship	-----NR-----	-----	-----	-----	-----	40 ^b	39	40	25	7	2	153		
46N/10W-912	C. Robert Hainey	Irrigation	300 feet below intake	Staff gage and depth-flow relationship	-----NR-----	-----	60 ^b	110 ^b	110 ^b	110 ^b	124	93	50	9	9	675		
46N/10W-1611	Leon Handley	Industrial	50 feet below intake	Staff gage and depth-flow relationship	-----NR-----	-----	-----	-----	-----	590 ^b	317	457	447	332	59	2,202		
46N/10W-2121	John N. Pickens	Irrigation	0.1 mile below intake	Staff gage and depth-flow relationship	-----NR-----	-----	-----	-----	-----	38	26	19	13	14	14	124		
46N/11W-581	W. W. Robinson, Jr.	Irrigation Stockwatering	100 feet below intake	Staff gage and depth-flow relationship	0	0	0	0	0	40 ^b	132	98	100	55	1	13	439	
46N/11W-571	R. G. Friddy	Irrigation Stockwatering	50 feet below intake	Staff gage and depth-flow relationship	-----NR-----	-----	-----	30 ^b	30 ^b	70	37	8	29	35	3	242		
46N/11W-611	Stanley P. Schwartz	Irrigation Stockwatering	200 feet below intake	Staff gage and depth-flow relationship	-----NR-----	-----	-----	-----	-----	37	9	10	5	8	7	76		
46N/11W-611	Stanley P. Schwartz	Irrigation Stockwatering Mining	0.1 mile below intake	Staff gage and depth-flow relationship	-----NR-----	-----	-----	-----	-----	79	67	68	72	73	29	388		
46N/11W-721	Stanley P. Schwartz W. O. Manning	Irrigation	300 feet below intake	Staff gage and depth-flow relationship	-----NR-----	-----	-----	-----	-----	6	1	0	0	4	5	16		
46N/11W-1811	H. C. Hammon	Irrigation Domestic	At intake	Staff gage and depth-flow relationship	-----NR-----	-----	-----	-----	-----	21	46	39	72 ^b	79 ^b	84 ^b	341	Water diverted after October 15 was for domestic use only.	
46N/11W-2811	O'Neil Creek Ditch	Irrigation Domestic	0.3 mile below intake	Staff gage and depth-flow relationship	-----NR-----	-----	-----	-----	-----	65	67	78	78	59	27	374		
46N/11W-3511	Hamburg Ditch	Irrigation Domestic	30 feet below intake	Staff gage and depth-flow relationship	-----NR-----	-----	-----	-----	-----	65	88	98	99	100	79	529		

* See remarks

e Monthly value estimated

--- Diversion estimated for period indicated

--NR-- No record for period indicated

TABLE 5 (Continued)
MONTHLY RECORDS OF SURFACE WATER DIVERSIONS IN
KLAMATH RIVER HYDROGRAPHIC UNIT, 1958

Location number	Diversion name or owner	Use	Point of measurement or estimate	Method of observation and calculation	Amount diverted, in acre-feet												Remarks	
					Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sept	Oct	Nov	Dec		Total
SEIAD VALLEY SUBUNIT (Continued)																		
H.B. & V. 46N/134-36E1	Kate Martin Jose McGulley	Irrigation	20 feet below intake	Staff gage and depth-flow relationship							20	26	26	35	29	9	145	
46N/124-12E1	Fred Jensen	Irrigation Stockwatering	0.2 mile below intake	Staff gage and depth-flow relationship	0	0	0	0	0	30	115	82	77	100	26	0	480	
46N/124-12E1	Loy Conrad Fred Jensen	Irrigation Stockwatering	100 feet below intake	Staff gage and depth-flow relationship	0	0	0	0	0	70	206	181	193	198	50	0	898	
46N/124-14C1	Grider Creek Club	Irrigation Stockwatering	300 feet below intake	Staff gage and depth-flow relationship						30	32	47	25	21	18	21	194	
46N/124-14E1	Grider Creek Club	Irrigation	0.1 mile below intake	Staff gage and depth-flow relationship							100	103	122	114	80	113	632	
46N/124-14N1	J. Byer Norman Valley	Irrigation Industrial Stockwatering	At intake	Staff gage and depth-flow relationship						100	130	170	737	345	402	386	1,956	
47N/104-26S1	Benjamin F. Nepleesen St. Francis Investment Company	Irrigation Stockwatering Mining	3.5 miles below intake	Staff gage and depth-flow relationship								95	87	90	36	15	323	
SOMES BAR SUBUNIT																		
12N/65-10F1	F. P. Dietz	Domestic Power	At nozzle	Nozzle rating	10	9	9	9									37	Small domestic use not included in total.
12N/65-28N1	Luther Hickox	Mining Power	At nozzle	Nozzle rating	50	45	50	48	50	48	50	50	48	50	48	49	586	
12N/65-28N1	Luther Hickox	Mining	At nozzle	Nozzle rating	528	477	528	510	528	510	255	0	0	0	0	0	3,336	
12N/65-34U1	Malissa Langford	Power Domestic	0.7 mile below intake	Staff gage and depth-flow relationship	20	20	20	20	20	24	25	21	18	25	22	22	257	
13N/65-59U1	J. B. Ekström	Power	At nozzle	Nozzle rating	17	16	17	17	17	8	7	7	7	7	7	7	144	
13N/65-33U1	L. H. Hayes	Irrigation Domestic Stockwatering Power	At nozzle	Nozzle rating and operation record	28	25	28	27	32	34	36	36	34	28	26	28	362	Small domestic use not included in total.

* See remarks
* Monthly value estimated
---*--- Diversion estimated for period indicated
--NR-- No record for period indicated

TABLE 5 (Continued)

MONTHLY RECORDS OF SURFACE WATER DIVERSIONS IN
KLAMATH RIVER HYDROGRAPHIC UNIT, 1958

Location number	Diversion name or owner	Use	Point of measurement or estimate	Method of observation and calculation	Amount diverted, in acre-feet												Remarks			
					Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sept	Oct	Nov	Dec		Total		
SOMES BAR SUBUNIT (Continued)																				
13N/6E-33M1 H. B. & M. Stanhaw Mines	Power Domestic		--	Estimate	-----														40*	Small domestic use not included in total.
15N/7E-13B1 M. E. Lemon	Power		At nozzle	Nozzle rating	30	27	30	29	30	24	17	17	16	16	16	17	269			
15N/7E-13C1 W. E. Lemon	Irrigation		0.1 mile below intake	Staff gage and depth-flow relationship	-----N/A-----														304	
15N/8E-29K1 Ross Y. Kennedy	Irrigation Domestic		--	Estimate	-----														400	
16N/7E-14K1 Happy Camp Improvement, Inc.	Municipal		At pump	Pump test and power record	-----N/A-----														299*	Total amount is for two pumps.
16N/8E-32B1 L. H. Smith	Domestic Mining Power		At nozzle	Nozzle rating	-----N/A-----	129	125	125	129	125	129	129	125	129	125	130	1,275			
WEITCHPEC SUBUNIT																				
11N/6E-20J1 Agnes Borez	Power		At nozzle	Nozzle rating	6	5	6	5	6	5	0	0	0	0	0	0	33			
11N/6E-21E1 United States Six Rivers National Forest	Power		At nozzle	Nozzle rating	44	39	44	42	43	19	19	19	19	19	19	19	345			
11N/6E-31F1 Orleans Veneer and Lumber Company	Industrial		At pump	Pump test and operation record	303	271	295	292	301	287	303	295	293	303	284	303	3,530			
11N/6E-32A1 11N/6E-32A2 Roy McGinn	Domestic Power		At nozzle	Nozzle rating	104	94	104	100	104	101	104	104	101	104	100	104	1,224*	Small domestic use not included in total.		
WOOLEY CREEK SUBUNIT																				
(No diversions located in this subunit)																				

* See remarks

e Monthly value estimated

---e--- Diversion estimated for period indicated

---NR--- No record for period indicated

Imports and Exports

No surface water was imported to or exported from the Klamath River Hydrographic Unit.

Consumptive Use

In the Klamath River Hydrographic Unit, the largest consumptive use of applied water is for irrigated agriculture. Consumptive use of water is defined as water consumed by vegetative growth for transpiration and building of plant tissue, and the water evaporated from adjacent soil, from water surfaces, and from foliage. It also includes water similarly consumed and evaporated by urban and other nonvegetative land use.

Based on the unit consumptive use values given in Department of Water Resources Bulletin No. 83, "Klamath River Basin Investigation", the consumptive use of applied water during 1958 is estimated to have been 10,300 acre-feet for irrigated agriculture. In addition, approximately 940 acre-feet were used for domestic and municipal purposes, and 1,000 acre-feet for industrial purposes in the production of lumber, plywood, and other wood products. The consumptive use of water involved in the production of power and for mining purposes is negligible and consists primarily of evaporation from canal surfaces.

Significant increases in the unit consumptive use values are indicated on the basis of studies now underway in the Department. Revision of the above estimates are not considered to be warranted until these studies are completed and the new values adopted. As a later phase of this investigation, estimates of future water requirements will be made utilizing the new values.

TABLE 6
INDEX TO SURFACE WATER DIVERSIONS
KLAMATH RIVER HYDROGRAPHIC UNIT

Diversion name or owner	Location number	Subunit	References	
			Plate 2 Sheet No.	Text and appendixes Page No.
Ahlgren, John	40N/12W-13L1	Sawyers Bar	28	53,74,109
Alfonse, Louis	47N/6W-6B1	Hornbrook	6	48,106,C-17
Attebery, Arthur	17N/7E-26P1	Happy Camp	8	43,104
Attebery, Frank Hockaday, Alve	17N/7E-16R1	Happy Camp	8	43,103
Bagley, LeRoy	46N/10W-23C1	Beaver Creek	9	36,100
Barton, Chester H.	46N/10W-15Q1	Seiad Valley	9	56,111
	47N/12W-32P1	Happy Camp	5	44,68,104
Beck, Paul G. Hockaday, Charles	17N/7E-4P1	Happy Camp	8	41,67,103,C-16
Bendl, Richard T.	40N/12W-32C1	Sawyers Bar	28	53,74,C-16
Bennett, Homer H.	10N/7E-2C1	Salmon River	30	52,73,109
Black Mountain Ranch Cardoza, Frank R.	47N/6W-20H1	Hornbrook	6	49,71,107
	47N/6W-27H1	Hornbrook	6	49,71,107
	47N/6W-27H2	Hornbrook	6	49,71,107
	47N/6W-28C1	Hornbrook	6	50,71,107,108
	47N/6W-28F1	Hornbrook	6	60,108
Black Mountain Ranch Spearin, Alfred W.	47N/6W-21M1	Hornbrook	6	49,71,107
Bloomingcamp, Elsie Foster, J. N.	47N/4W-18B2	Hornbrook	7	46,69,105
	47N/4W-18Q1	Hornbrook	7	46,69,105
Boaz, Jack Nance, Clarence R.	38N/11W-30M1	Cecilville	34	38,66,C-17
Borsz, Agnes	11N/6E-20J1	Weitchpec	27	59,77
Bow, William	10N/4E-32C1	Klamath Glen	29	52,72,109
Brown, Leo and Rose L.	10N/7E-4P1	Salmon River	30	52,73,109,C-12,C-14
Brown, R. J.	48N/3W-27M1	Copco Lake	4	39,102
Buchella, F. H. Hartnett, Frank J.	39N/11W-2B1	Sawyers Bar	31	53,73
Burns, F. L.	48N/7W-15C1	Hornbrook	3	51,72,108
	48N/7W-15C2	Hornbrook	3	51,72,108
	48N/7W-15D1	Hornbrook	3	51,72,108
	48N/7W-21C1	Hornbrook	3	51,72,109
Bussert, W. H.	18N/7E-32B1	Happy Camp	1	43,68,104
Byer, J. Valpey, Norman	46N/12W-14N1	Seiad Valley	9	57,76,111
Cairns, S. B.	47N/5W-28H1	Hornbrook	7	48,106

TABLE 6 (Continued)
INDEX TO SURFACE WATER DIVERSIONS
KLAMATH RIVER HYDROGRAPHIC UNIT

Diversion name or owner	Location number	Subunit	References	
			Plate 2 Sheet No.	Text and appendixes Page No.
California-Oregon Power Company	47N/5W-16D1	Hornbrook	7	47,70,106
	48N/4W-19D1	Copco Lake	4	40
	48N/4W-29N1	Copco Lake	4	40,102,108
	48N/5W-25A1	Copco Lake	4	41,67,103
Callisch, George E.	47N/6W-33D1	Hornbrook	6	50,71,108
Cardoza, Frank R.	See Black Mountain Ranch			
Carnes, Charley Howard, C. T.	17N/7E-27H1	Happy Camp	8	43
Carsner, Winnie Finn, Ted H. Linderman, Julia	10N/8E-31G1	Cecilville	30	37,65
Chaffey, R. L.	14N/1E-28N1	Klamath Glen	17	52,109,C-13
Charles, Ivan Martin, John	11N/7E-19H1	Salmon River	27	52,73,109
Chessbrough Foster, J. N. McKenzie, W. E.	47N/4W-7J1	Hornbrook	7	45,69,105
	47N/4W-18B3	Hornbrook	7	46,69,105
	47N/4W-18B4	Hornbrook	7	46,69,105
Circle Two Ranch Hegler, Arthur A., Ida M., Mable M., and Merle R.	46N/9W-13M1	Beaver Creek	10	34,64,99,100
	46N/9W-13N1	Beaver Creek	10	34,64,99,100
	46N/9W-13N2	Beaver Creek	10	34,64,99
	46N/9W-24D1	Beaver Creek	10	34,64,99,100
	46N/9W-24E1	Beaver Creek	10	34,64,100
	46N/9W-24E2	Beaver Creek	10	35,64,100
	46N/9W-24F1	Beaver Creek	10	35,64,100
	46N/9W-24F2	Beaver Creek	10	35,64,100
	46N/9W-24K1	Beaver Creek	10	35,64,100
	46N/9W-24L1	Beaver Creek	10	35,64,100
	46N/9W-25A1	Beaver Creek	10	35,64,100
Clyburn, Thomas M.	46N/7W-2A1	Beaver Creek	10	33,63,C-17
Cold Creek Ranch Opdyke, Ralph J.	47N/4W-9F1	Hornbrook	7	46,105
Gonrad, Loy Jensen, Fred	46N/12W-12H1	Seiad Valley	9	57,76,111
Coolie, Charles	45N/8W-11L1	Beaver Creek	(8)	33,63
Cooper, Homer	10N/4E-32F1	Klamath Glen	29	52,73,109
Copco Lake	48N/4W-29P1	Copco Lake	4	40,67
Cottonwood Irrigation and Mining Company	47N/7W-1F1	Hornbrook	6	50,71,107,108
Cripps, Aubrey Y.	11N/7E-35P1	Salmon River	27	52, 73,C-15
Cummins, Bob	47N/6W-18E1	Hornbrook	6	48,70,107
Curry, Duane H.	18N/6E-25L1	Happy Camp	1	43,68,C-15,C-17
DeAvilla, Jesse R.	47N/3W-32N1	Beaver Creek	6	36,101

TABLE 6 (Continued)
INDEX TO SURFACE WATER DIVERSIONS
KLAMATH RIVER HYDROGRAPHIC UNIT

Diversion name or owner	Location number	Subunit	References	
			Plate 2 Sheet No.	Text and appendixes Page No.
DeAvilla, Jesse R. Stanley, Art and Letha	47N/9W-24H1	Beaver Creek	6	37,101,C-12
Dietz, P. P.	12N/6E-10F1	Somes Bar	(g)	58,76
Draggoo, Fred	47N/6W-29E1	Hornbrook	6	50,71,108
Draggoo, Fred Jespersen, Allen	47N/7W-24C1	Hornbrook	6	51,72,108
Duncan, Kenneth R.	46N/9W-28E1	Beaver Creek	10	35,65
Eastlick, Doug	40N/11W-13J1	Sawyers Bar	28	53,73
Edwards, J. W.	47N/4W-8J1	Hornbrook	7	45,105
	47N/4W-8Q1	Hornbrook	7	46,105
Ellis Ditch Rogers, Bill Spearin, Alfred W. and C. F.	47N/6W-17F1	Hornbrook	6	48,70,107
Ensele, Etta O.	46N/4W-15D1	Hornbrook	11	44,104,C-12
	46N/4W-15M1	Hornbrook	11	44,68,104
Ephraim, J. B.	13N/6E-5H1	Somes Bar	21	58,76
Faulkner, William	44N/11W-2B1	Scott Bar	16	54,110
Fehlman, Donald E. and Avelyn L.	46N/5W-5L1	Hornbrook	(g)	44,104,C-21
	46N/5W-7A1	Hornbrook	11	45,105,C-21
Finn, Ted H.	See Carsner, Winnie			
Fitzgerald, John B.	47N/4W-18E1	Hornbrook	7	46,69,105,106
	47N/5W-11J1	Hornbrook	7	47,106
	47N/5W-12N1	Hornbrook	7	47,106
Ford, Louis	46N/6W-6D1	Hornbrook	(g)	45,C-18
Foster, J. N.	47N/4W-18L1	Hornbrook	7	60,105
	47N/4W-18M1	Hornbrook	7	60,105
	47N/4W-20M1	Hornbrook	7	60,105
	47N/4W-20P1	Hornbrook	7	46,69,105,106
	See also Bloomingcamp, Elsie See also Chessbrough			
Fournier, Joseph	See Scott Bar Mining Company			
Franklin, Jess and Nelson Quadros, Mary Ann	47N/5W-14E1	Hornbrook	7	47,106
Frederick, Russell	46N/5W-14Q1	Hornbrook	11	45,69,105,C-21
Freitas, Louie	47N/6W-36A1	Hornbrook	6	50,71,108
Freshour, Emma Pearl	46N/8W-1A1	Beaver Creek	10	33,63,99
Freshour, Joe	46N/8W-2A1	Beaver Creek	10	33,63,99
	47N/8W-35K1	Beaver Creek	6	36,65,99
Freshour, Richard Rogers, W. W.	46N/8W-1F1	Beaver Creek	10	33,63,99

TABLE 6 (Continued)
INDEX TO SURFACE WATER DIVERSIONS
KLAMATH RIVER HYDROGRAPHIC UNIT

Diversion name or owner	Location number	Subunit	References	
			Plate 2 Sheet No.	Text and appendices Page No.
Fruit Growers Supply Company	47N/7W-4M1	Hornbrook	6	26,50
	48N/7W-28E1	Hornbrook	3	26,51
Fugaalar, J.	48N/4W-33Q1	Copco Lake	4	40,102
	48N/4W-33R1	Copco Lake	4	40,102
George, Katarine C.	39N/10W-31D1	Cecilville	31	38,66,101
Godfrey, George R. and Robert G.	39N/12W-17B1	Cecilville	31	39,66,101
Gould, Olyn W.	38N/11W-29Q1	Cecilville	34	38,66,C-19
Grider Creek Club	46N/12W-14C1	Seiad Valley	9	57,76,111
	46N/12W-14E1	Seiad Valley	9	57,76,111
Grieb, G. M.	47N/6W-17E1	Hornbrook	6	60,106
	47N/6W-17E2	Hornbrook	6	60,106
	47N/6W-17N1	Hornbrook	6	60,107
	47N/6W-18J1	Hornbrook	6	60,107
Hager, Benjamin H.	46N/5W-22M1	Hornbrook	11	45,69,105
Hale, Prentis C.	16N/8E-17F1	Happy Camp	12	41,67,103
Hall, Aubrey A.	17N/7E-22B1	Happy Camp	8	43,68,
	17N/7E-26E1	Happy Camp	8	43,68,104,C-20
Hamburg Ditch Hamburg, Community of	46N/11W-35Q1	Seiad Valley	9	26,57,75,111
Hamer, R. T.	47N/12W-32L1	Happy Camp	5	44,68,104
Hammon, H. C.	46N/11W-18E1	Seiad Valley	9	56,75,111,C-13
Handley, Leon	46N/10W-16J1	Seiad Valley	9	56,75
Happy Camp Improvement, Inc.	16N/7E-14M1	Somes Bar	12	26,59,77,C-14,C-18,
Hartnett, Frank J.	See Buchella, F. H.			
Haworth, S. D.	47N/7W-12H1	Hornbrook	6	50,72,108,C-12
	47N/7W-12H2	Hornbrook	6	51,72,108,C-12
Hayes, L. H.	13N/6E-33G1	Somes Bar	21	58,76,112
Head, Edward	17N/7E-34F1	Happy Camp	8	43,68,104
Head, Guy	17N/7E-9E3	Happy Camp	8	42,68,103
	17N/7E-9E4	Happy Camp	8	42,68,103
Hegler, Arthur A., Ida M., Mable M., and Merle R.	See Circle Two Ranch			
Hessig Ranch	48N/3W-14D1	Copco Lake	4	39,102
	48N/3W-14D2	Copco Lake	4	39,102
	48N/3W-34G1	Copco Lake	4	39,102
	48N/3W-35D1	Copco Lake	4	40,102
Hickox, Luther	12N/6E-28M1	Somes Bar	24	58,76
	12N/6E-28N1	Somes Bar	24	58,76
Hill, Dorothy	16N/7E-14N1	Somes Bar	12	59,112

TABLE 6 (Continued)
INDEX TO SURFACE WATER DIVERSIONS
KLAMATH RIVER HYDROGRAPHIC UNIT

Diversion name or owner	Location number	Subunit	References	
			Plate 2 Sheet No.	Text and appendixes Page No.
Hockaday, Alve	See Attebery, Frank			
Hockaday, Charles	See Beck, Paul G.			
Holstein, W. L.	See Bagley, LeRoy			
Hornbrook Water Company	47N/6W-20E1	Hornbrook	6	26,49,71
Houston, Kenneth	47N/5W-19P1	Hornbrook	7	48,70,106
Howard, C. T.	See Carnes, Charles			
Huey, David M.	17N/7E-4G1	Happy Camp	8	41,67,103,C-14
Hughes, Welsey	See Reed, Fred			
Jackson, Bert C.	46N/9W-16H1	Beaver Creek	10	34,64,100
Jacobson, L. B.	45N/8W-10R1	Beaver Creek	14	33,63,C-14
Jennings, R.	47N/7W-31B1	Beaver Creek	6	36,100
	47N/7W-31E1	Beaver Creek	6	36,100
Jensen, Fred	46N/12W-12F1	Seiad Valley	9	57,76,111
	See also Conrad, Loy			
Jespersion, Allen	See Draggoo, Fred			
Johnson, William S.	37N/10W-4N1	Cecilville	36	37,65,101
Jones Ditch Dr. Vogel	47N/4W-18B1	Hornbrook	7	46,69,105,106
Jones, Richard Meek, Mason Pack, Richard	46N/9W-3M1	Beaver Creek	10	33,63,99
	46N/9W-10D1	Beaver Creek	10	34,63,99
Jones, Sam	10N/4E-32E1	Klamath Glen	29	52,72
Jordan Ditch Sawyer, E.W.	37N/10W-5D1	Cecilville	36	37,65,101,C-15
Judge, Patricia	40N/11W-33P1	Sawyers Bar	28	53,74,C-12,C-13
Julien, Elmer and Robert	47N/6W-19P1	Hornbrook	6	49,70,107
Kennedy, Ross Y.	15N/8E-29K1	Somes Bar	15	58,77,112
Keystone Ditch Siskiyou Mills Yreka Veneer	16N/7E-2F1	Happy Camp	12	41,67
Kleaver, Gus	44N/11W-8R1	Scott Bar	16	54,110
Kniffen, Mrs. Marion M.	17N/6E-10R1	Happy Camp	(g)	41,67,C-13
Knudsen, Larry	11N/6E-20F1	Weitchpec	27	59,113
Krupa, Harry Nowdesha, B. U. Skillens, George	45N/10W-15R1	Scott Bar	13	54,74,110
Kuck, Clarence	46N/5W-28R1	Hornbrook	11	45,69,105,C-20
Kurt, Herman	47N/7W-1G1	Hornbrook	6	50,71,108

TABLE 6 (Continued)
INDEX TO SURFACE WATER DIVERSIONS
KLAMATH RIVER HYDROGRAPHIC UNIT

Diversion nome or owner	Locotion number	Subunit	References	
			Plate 2 Sheet No.	Text and oppendixes Page No.
Lang, Elmer and Frank	46N/9W-23L1 46N/9W-26B1 46N/9W-26K1	Beaver Creek Beaver Creek Beaver Creek	10 10 10	34,64,100 35,65,100 35,65,100
Langford, Melissa	12N/6E-34J1	Somes Bar	24	58,76
Lathrop, F. L. and C. G.	47N/4W-1C1 47N/4W-2C1 48N/4W-34J1 48N/4W-35P1 48N/4W-36H1 48N/4W-36L1	Copco Lake Copco Lake Copco Lake Copco Lake Copco Lake Copco Lake	7 7 4 4 4 4	39,102 39,102 40,102 40,102 40,103 41,103
Lee, Earl K.	16N/7E-1H1	Happy Camp	12	41,103,C-12
Lemas, E. G.	47N/4W-3M1 See also Silva-Linich Ditch	Copco Lake	7	39,67,102
Lemon, W. E.	15N/7E-13B1 15N/7E-13G1	Somes Bar Somes Bar	15 15	58,77,112 58,77,112
Lemos, Lawrence	48N/6W-31R1 48N/6W-32M1	Hornbrook Hornbrook	3 3	51,72,108 51,72,108
Linderman, Julia	See Carsner, Winnie			
Liskey, James	45N/5W-17N1	Hornbrook	7	47,70,106
Lord, Robert R.	39N/12W-31L1	Cecilville	31	39
Madero, Doan	48N/5W-21N1	Hornbrook	4	51,72,108
Maplesden, Benjamin F. St. Francis Investment Company	47N/10W-26F1	Seiad Valley	5	57,76,101,112
Martin, John	See Charles, Ivan			
Martin, Kate McCulley, Rose R.	46N/11W-36R1	Seiad Valley	9	57,76,111
McBroom, Edward A.	37N/11W-12N1	Cecilville	36	37,66
McBroom, Mrs. John N.	38N/11W-30H1	Cecilville	34	38,66,101
McClimans, Elmer E.	17N/7E-7G1	Happy Camp	8	42,103,C-19
McCulley, Rose R.	See Martin, Kate			
McGain, Roy	11N/6E-32A1 11N/6E-32A2	Weitchpec Weitchpec	27 27	60,77 60,77
McGinnis, Mrs. Felix H.	17N/8E-17C1	Happy Camp	8	43,104
McKenzie, W. E.	See Chessbrough			
Meek, Mason	See Jones, Richard			
Moody, Dennis	37N/11W-3N1 37N/11W-9A1	Cecilville Cecilville	36 36	37,65,101 37,66,101

TABLE 6 (Continued)
INDEX TO SURFACE WATER DIVERSIONS
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Diversion name or owner	Location number	Subunit	References	
			Plate 2 Sheet No.	Text and appendixes Page No.
Morgan, A. A.	46N/10W-7G1	Seiad Valley	9	55,75,110
Mullin, William W.	47N/8W-19M1	Beaver Creek	6	36,100
Nance, Clarence R.	See Boaz, Jack			
Nowdesha, B. U.	See Krupa, Harry			
O'Brien, D. B.	47N/5W-13M1	Hornbrook	7	47
O'Neil Creek Ditch Robles, Nels	46N/11W-28A1	Seiad Valley	9	57,75,111
Opdyke, Ralph J.	See Cold Creek Ranch			
Orleans Veneer and Lumber Company	11N/5E-25J1	Weitchpec	27	26,59
	11N/6E-31M1	Weitchpec	27	26, 59,77
Pack, Richard	See Jones, Richard			
Paine, Luran	47N/5W-19A1	Hornbrook	7	47,70,106
	47N/5W-19J1	Hornbrook	7	47,70,106
Pickens, John N.	46N/10W-21Q1	Seiad Valley	9	56,75,111
Priddy, R. G.	46N/11W-5F1	Seiad Valley	9	56,75,111
Price, Brazil and Zella	44N/11W-27K1	Scott Bar	16	54,C-14
Protsman, Alfred A.	47N/6W-25D1	Hornbrook	6	49,71,107
	47N/6W-25H1	Hornbrook	6	49,71,107
Quaas Ditch Quaas, John W.	38N/10W-32H1	Cecilville	34	38,66,101
Quadros, Mary Ann	47N/5W-11M1	Hornbrook	7	47,106
	See also Franklin, Jess and Nelson			
Quigley-Lichens Ditch	47N/8W-31F1	Beaver Creek	6	36,65,100,C-12,C-13
Rainey, C. Robert	46N/10W-9R1	Seiad Valley	9	55,75,111
	46N/10W-9R2	Seiad Valley	9	55,75,111
Rainey, Fred	46N/10W-8J1	Seiad Valley	9	55,75,110
Reed, Fred	46N/5W-27A1	Hornbrook	11	45,105
	46N/5W-27F1	Hornbrook	11	45,105
Reeves, Mrs. George	44N/11W-2K1	Scott Bar	16	54,110
Roberts, Thomas	17N/7E-15N1	Happy Camp	8	42,68,103,C-19
	17N/7E-16A2	Happy Camp	8	42,68,103
Roberts, Virgil	46N/9W-28N1	Beaver Creek	10	35
	46N/9W-33E1	Beaver Creek	10	36
	46N/9W-33F1	Beaver Creek	10	36,65,100
Robertson, L. G.	47N/6E-7E1	Hornbrook	6	48,70,106
	47N/6E-18G1	Hornbrook	6	49,70,107
	47N/6E-18G2	Hornbrook	6	49,70,106,107

TABLE 6 (Continued)
INDEX TO SURFACE WATER DIVERSIONS
KLAMATH RIVER HYDROGRAPHIC UNIT

Diversion name or owner	Location number	Subunit	References	
			Plate 2 Sheet No.	Text and appendices Page No.
Robinson, Asa	46N/10W-5F1	Seiad Valley	9	55,74,110
	46N/10W-5F2	Seiad Valley	9	55,74,110
	46N/10W-5Q1	Seiad Valley	9	55,74,110
Robinson, W. W., Jr.	46N/11W-5B1	Seiad Valley	9	56,75,111
	47N/11W-32J1	Seiad Valley	5	57,112,C-16
Robles, Nels	See O'Neil Creek Ditch			
Rogers, Bill	47N/6W-17D1	Hornbrook	6	48,70,107
Spearin, Alfred W. and C.F.	See also Ellis Ditch			
Rogers, W. W.	46N/9W-3E1	Beaver Creek	10	33,63,99
	46N/9W-3M2	Beaver Creek	10	33
	46N/9W-10D2	Beaver Creek	10	34,63,99
	See also Freshour, Richard			
Rosebush, Oliver A. and Floy M.	See Silva-Linich Ditch			
Rosten, Ed	See Black Mountain Ranch			
Sagaser, William D.	40N/12W-28F1	Sawyers Bar	28	53,74,C-15
Sawyer, E. W.	37N/11W-13M1	Cecilville	36	37,66,C-16
	37N/11W-23G1	Cecilville	36	38,66
	See also Jordan Ditch			
Sawyers Bar, Community of	40N/11W-28F1	Sawyers Bar	28	26,53,73
Schedler, Carl W.	46N/9W-10J1	Beaver Creek	10	34,64,99
Schwartz, Stanley P.	46N/11W-6G1	Seiad Valley	9	56,75,111
	46N/11W-6Q1	Seiad Valley	9	56,75,111
Schwartz, Stanley P. Simning, W. O.	46N/11W-7D1	Seiad Valley	9	56,75,111
	46N/11W-7D2	Seiad Valley	9	56
Scott Bar Community Water Association	45N/10W-21E1	Scott Bar	13	26,54,74,110
Scott Bar Mining Company Fournier, Joseph	45N/10W-22D1	Scott Bar	13	54,110
Sedros, Alice	17N/7E-5L1	Happy Camp	8	42,67,103
	17N/7E-9E1	Happy Camp	8	42,67,103
Sharp, J. F. Lumber Company	17N/7E-16A1	Happy Camp	8	42
Shasta Mining Company	38N/11W-29D1	Cecilville	34	38,66,101
Silva-Linich Ditch Lemas, E. G. Rosebush, Oliver A. and Floy M.	47N/4W-9G1	Hornbrook	7	46,69,102
Simning, W. O.	See Schwartz, Stanley P.			
Simonson Lumber Company	13N/1E-15D1	Klamath Glen	20	52,73
Siskiyou Mills	16N/7E-1N1	Happy Camp	12	41,67
	See also Keystone Ditch			

TABLE 6 (Continued)
INDEX TO SURFACE WATER DIVERSIONS
KLAMATH RIVER HYDROGRAPHIC UNIT

Diversion name or owner	Location number	Subunit	References	
			Plate 2 Sheet No.	Text and appendixes Page No.
Skillens, George	See Krupa, Harry			
Smith, L. R.	16N/8E-32B1	Somes Bar	12	59,77
Smith, R. S.	44N/11W-3M1	Scott Bar	16	54,110
Smud, L. F.	47N/5W-13G1	Hornbrook	7	47,69,106
Spearin, Alfred W.	See Black Mountain Ranch See also Ellis Ditch See also Rogers, Bill			
Spearin, C. F.	47N/6W-17Q1 See also Ellis Ditch See also Rogers, Bill	Hornbrook	6	48,70,107
Stanley, Art and Letha	See DeAvilla, Jesse R.			
Stenshaw Mines	13N/6E-33M1	Somes Bar	21	58,77
St. Francis Investment Company	46N/9W-7Q1 See also Maplesden, Benjamin F.	Beaver Creek	10	34,63,99
Stockett, Walter B.	47N/8W-30F1	Beaver Creek	6	36,100
Sylva, Anthony J.	46N/4W-32A1 46N/4W-32B1 46N/4W-33D1	Hornbrook Hornbrook Hornbrook	11 11 11	44,104 44,104 44,69,104
Sylva, John	47N/7W-1F2	Hornbrook	6	50,71,108
Thomain, Gene	39N/11W-4Q1 39N/11W-9B1	Sawyers Bar Sawyers Bar	(g) 31	53,73 53,73
Thomas, Holly	46N/12W-30P1	Happy Camp	9	43,68,104
Thomason, R. W.	46N/4W-28J1	Hornbrook	11	44,68,104
Thompson, Roy	14N/1E-20K1	Klamath Glen	17	52
Thornton, Glen	39N/10W-15B1	Cecilville	31	38,66
Tormey, Warren	48N/4W-21C1	Copco Lake	4	40,67,102
Tull, Lem LeRoy	47N/5W-30D1	Hornbrook	7	48,70,106
United States Air Force	14N/1E-33R1	Klamath Glen	17	52,73,C-18
United States Klamath National Forest	38N/11W-17L1 40N/11W-32E1 44N/11W-20R1	Cecilville Sawyers Bar Scott Bar	34 28 16	38,66,101 53,74,C-16 54,C-17
United States Six Rivers National Forest	11N/6E-21E1 11N/6E-32B1	Weitchpec Weitchpec	27 27	59,77,C-17 60,C-18
Valpey, Norman	See Byer, J.			
Volgo, Dr.	See Jones Ditch			
Waddell, Lee C.	17N/7E-9E2	Happy Camp	8	42,67,103

TABLE 6 (Continued)
INDEX TO SURFACE WATER DIVERSIONS
KLAMATH RIVER HYDROGRAPHIC UNIT

Diversion name or owner	Location number	Subunit	References	
			Plate 2 Sheet No.	Text and appendixes Page No.
Ward, V. B.	46N/10W-3M1	Seiad Valley	9	55,74,110
	46N/10W-3N1	Seiad Valley	9	55,74,110
	46N/10W-9J1	Seiad Valley	9	55,75,111
Watson, H. C.	48N/7W-22R1	Hornbrook	3	60,109
	See also Wreden, Walter			
Westover, Nestor A.	38N/11W-21A1	Cecilville	34	38,66,
Willamette Plywood Corporation	17N/7E-16Q1	Happy Camp	8	42,C-19
Williams, Alan	46N/5W-7H1	Hornbrook	11	45,105
Woods, T. C.	46N/7W-21D1	Beaver Creek	10	33,63,99
Wreden, Walter	47N/7W-5G1	Hornbrook	6	50,108
	48N/7W-34F1	Hornbrook	3	51,72,109
Wright, Hugh	16N/7E-9P1	Somes Bar	12	59,112
	16N/7E-15F1	Somes Bar	12	59,112,C-15
	16N/7E-16H1	Somes Bar	12	59,112,C-15
Yreka Veneer	See Keystone Ditch			

CHAPTER III. LAND USE

The results of a survey of water uses and water facilities in the Klamath River Hydrographic Unit were presented in Chapter II. In this chapter are reported the results of a survey of present land uses as related to water use and a brief summary of historical conditions. A thorough knowledge of the nature and extent of land and water uses under past and existing conditions is one of the primary requisites in evaluating future water requirements within the hydrographic unit.

Historical Land Use

Development of the Klamath River area is associated with the rush for gold. As the deposits became worked out, many of the miners moved on to more promising regions but some remained to settle the valley areas, to plant crops, and to raise livestock. Diversion systems which supplied water for the miners were used to supply irrigation water.

An early land use survey, including Klamath River Hydrographic Unit, was recorded in two reports by Frank Adams: (1) "Irrigation Resources of Northern California," published in "Report of the Conservation Commission of the State of California," January 1, 1913, and (2) Bulletin 254 by the U. S. Department of Agriculture, Office Experiment Station, "Irrigation Resources of California and Their Utilization," published in 1913. Mr. Adams reported that in 1912 there were some 9,600 acres of irrigated lands in the hydrographic unit.

Methods and Procedures

A detailed survey of land uses in the Klamath River Hydrographic Unit was conducted in 1958 as a part of this investigation. The land use survey was accomplished by plotting field observations on the aerial photographs which had previously been used to locate surface water diversions. Stereoscopes were used to assist in the field mapping procedure. As the use of each parcel of land was determined, it was delineated on the photographs. The hydrographic unit was traversed by automobiles as completely as roads and terrain permitted. Where necessary, inspections were made on foot. An example of land use delineated on an aerial photograph is shown on page 91.

After completion of the field mapping, the data delineated on the photographs were transferred to copies of U. S. Geological Survey quadrangle maps reproduced at a scale of 1:24,000. This procedure was necessary to bring the delineated areas to a common scale for accurate determination of acreages, since the scale of the aerial photographs used is not uniform. A series of these maps showing the location of all diversions and the fields, including idle and fallow lands associated with each irrigation diversion, was colored according to the land use categories and was reviewed by local parties concerned. These work maps were then used in the preparation of Plate 2.

Another series of these maps was used in computing the acreages of the land uses. Each delineated area on these maps was manually cut out and was carefully weighed on an analytical balance. These weights were converted to acreages using ratios determined for each of



Example of Land Use Delineated on Aerial Photograph

Symbols used on this photograph:

iP1 - irrigated alfalfa	nG6 - dry-farmed miscellaneous hay and grain
iP3 - irrigated mixed pasture	U - urban
iG1 - irrigated miscellaneous hay and grain	UI3 - urban industrial-storage yard
nP1 - dry-farmed alfalfa	UI6 - urban industrial-sawmill
nG1 - dry-farmed barley	RC - recreation commercial
nG2 - dry-farmed wheat	IL - idle-usually cropped or irrigated
nGF - dry-farmed grain-fallow	
NV - native vegetation	

the individual maps. This method has proven to be a very expedient and accurate means of area determination where a large number of small parcels are involved.

Present Land Use

The land uses, as mapped in the survey, are tabulated as they relate to water use such as irrigated lands, dry-farmed lands, urban lands, recreational lands, and naturally high water table lands. Lands not falling into any of these categories were mapped and are tabulated as native vegetation. Sheets 1 through 36 of Plate 2 are maps detailing this land use. The acreages of land uses within each subunit are presented in Table 7, page 98. These values represent gross acreages, including nonwater service areas such as roads, ditches, building and storage areas, and miscellaneous rights-of-way, which occur within the mapped areas.

Irrigated Lands

Irrigated lands, as designated in this report, include all agricultural lands which receive water artificially applied. Acreages of irrigated lands are reported in Table 8, page 99 by surface water diversion or by ground water and by subunits showing the crop grown. These irrigated lands are segregated into pasture, alfalfa hay and meadow pasture, grain, hay, truck and field crops, orchard, and idle and fallow irrigated lands. Pasture is further subdivided into mixed, native, and pasture; the latter comprising native pasture lands having a high water table induced by the application of irrigation water. Grain is subdivided into barley and wheat. Idle irrigated lands are those lands which were not irrigated in the year of survey but which had been irrigated within the



Seiad Valley



Hillside Irrigation
Near Lumgrey Creek

preceding three years. Fallow irrigated lands are those cultivated lands which may be irrigated during the year of survey, but which at the time of survey were only tilled and not planted to a crop.

The lands irrigated by surface water are identified on the work maps by diversion and by crop irrigated. The lands irrigated by ground water are identified by crop only. On Plate 2 they are grouped into three categories only: (1) those lands which received full irrigation during the year of survey; (2) those lands which received only partial irrigation because of insufficient water supply; and (3) those lands usually irrigated but which were idle or fallow in 1958.

Naturally High Water Table Lands

In addition to the lands which receive applied water as described above, there are lands supporting vegetation utilizing water from a naturally high water table, such as mountain meadows or lands adjacent to lakes and streams. These are shown in Table 7 as "Meadowlands" and on Plate 2 as "Naturally irrigated meadowlands." If standing water was observable in an area on which tules, cattails, bullrushes, and similar vegetation was growing, the area is shown in Table 7 and on Plate 2 as "Marsh lands."

Dry-farmed Lands

Dry-farmed lands are those lands normally planted to a crop but which do not receive applied water. This includes all lands so farmed whether or not a crop is produced in the year of survey. Although lands are mapped as "dry-farmed idle" if uncultivated in the year of

survey and "dry-farmed fallow" if tilled but without a crop, they are shown in Table 7 and on Plate 2 as "dry-farmed lands." Lands which had been uncultivated for more than three years and appear to have reverted to "native vegetation" were so mapped.

It should be noted that the term "dry-farmed" as used herein refers to the farming practice on these lands and not to a lack of soil moisture.

Since noncultivated rangelands are usually indistinguishable from similar lands not used for grazing purposes, both are designated as native vegetation. Water use in both cases is essentially the same and is dependent upon precipitation.

Urban Lands

Urban lands include the total areas of cities, towns, small communities, industrial plots, and military reservations which are large enough to be delineated. Also included are parks, golf courses, race tracks, and cemeteries within or near urban boundaries. The acreages represent gross delineations, including streets and vacant lots, and are therefore not necessarily fully developed at the present time. In this survey the boundaries of urban communities were delineated to include all lands with a density of one house or more per two acres. Military reservations are included in their entirety regardless of the extent of development.

Recreational Lands

Recreational lands are mapped on aerial photographs in the field in four categories: (1) residential, (2) commercial, (3) camp and trailer sites and, (4) parks. Recreation residential lands include

permanent and summer home tracts within a primarily recreational area. The estimated density of homes per acre was also indicated. Recreational commercial lands include those containing motels, resorts, hotels, stores, restaurants, and similar commercial establishments in primarily recreational areas. Lands mapped in the camp and trailer sites category include those areas so used within primarily recreational areas. There are no existing federal or state parks within the Klamath River Hydrographic Unit. Obviously, nearly all of the mountainous and water surface areas are suitable for some use such as hunting, fishing, hiking, picnicking, and other recreational activities of this nature. For the purpose of this land use survey, however, consideration is given only to those lands where some fairly intensive development occurs requiring water service.

All recreational lands are combined into one group in Table 7 and on Plate 2. As in the case of urban lands, the areas delineated are not necessarily fully developed.

Native Vegetation

Lands which are essentially in a native state and not included in any of the above categories are mapped as native vegetation. These lands are generally used for mining, commercial timber production, livestock range, and recreational activities such as fishing, hunting, hiking, and picnicking. They total approximately 2,123,730 acres of 99 percent of the Klamath River Hydrographic Unit. Included in these areas some farm building and storage areas, water surfaces, scattered residences, and other isolated uses covering a few acres or less which are too small to be mapped separately.

The native vegetation lands are not included in Table 7.



Left:
Town of Happy Camp



Below:
Fishing on the
Klamath River

TABLE 7
LAND USE IN
KLAMATH RIVER HYDROGRAPHIC UNIT, 1958
(In acres)

Subunit and County	Irrigated lands	Naturally high water table lands		Dry-farmed lands	Urban lands	Recreational lands
		Meadowlands	Marsh lands			
Applegate River Siskiyou County	0	310	0	0	0	10
Beaver Creek Siskiyou County	660	70	0	20	10	70
Cecilville Siskiyou County	160	530	0	0	0	60
Copco Lake Siskiyou County	650	180	0	30	20	30
Happy Camp Siskiyou County	240	200	0	10	350	220
Hornbrook Siskiyou County	4,090	40	20	12,560	350	40
Klamath Glen Del Norte County	130	160	40	480	500	310
Humboldt County	50	10	0	20	20	840
Salmon River Siskiyou County	30	320	0	0	0	30
Sawyers Bar Siskiyou County	10	500	0	0	60	70
Scott Bar Siskiyou County	70	360	0	10	10	100
Seiad Valley Siskiyou County	490	180	0	30	60	70
Somes Bar Humboldt County	0	0	0	0	0	10
Siskiyou County	120	1,040	0	10	20	90
Weitchpec Del Norte County	0	10	0	0	0	0
Humboldt County	10	20	10	70	100	150
Siskiyou County	0	0	0	0	0	0
Wooley Creek Siskiyou County	<u>0</u>	<u>670</u>	<u>0</u>	<u>0</u>	<u>0</u>	<u>0</u>
SUMMARY:						
Del Norte County	130	170	40	480	500	310
Humboldt County	60	30	10	90	120	1,000
Siskiyou County	<u>6,520</u>	<u>4,400</u>	<u>20</u>	<u>12,670</u>	<u>880</u>	<u>790</u>
TOTAL	6,710	4,600	70	13,240	1,500	2,100

TABLE 8

IRRIGATED LANDS IN
KLAMATH RIVER HYDROGRAPHIC UNIT, 1958
(In acres)

Location number	Oiversion name or owner	Pasture			Alfalfa hay and pasture	Grain		Hay	Truck and field crops	Orchard	Total lands irrigated	Idle	Fallow	Total
		Mixed	Native	Meadow		Barley	Wheat							
APLEGATE RIVER SUBUNIT														
(No diversions located in this subunit)														
BEAVER CREEK SUBUNIT														
M D B & M														
46N/7W-21D1	T. C. Woods	2									2	21		23
46N/8W-1A1	Emma Pearl Freshour	3			10						13			13
46N/8W-1F1	Richard Freshour W. W. Rogers	4			8						12			12
46N/8W-2A1 47N/8W-35K1	Joe Freshour	15			2			9			26	2		28
46N/9W-3E1	W. W. Rogers	39									39			39
46N/9W-3M1	Richard Jones Mason Meek Richard Pack	60			29						89			89
46N/9W-7Q1	St. Francis Invest- ment Company	7									7			7
46N/9W-10D1	Richard Jonee Mason Meek Richard Pack	18			31						49			49
46N/9W-10D2	W. W. Rogers	10									10			10
46N/9W-10J1	Carl W. Schedler				10						10			10
46N/9W-13M1	Circle Two Ranch				2						2			2
46N/9W-13N1	Circle Two Ranch				8						8			8
46N/9W-13N2 46N/9W-24D1	Circle Two Ranch				7						7			7

TABLE B (Continued)
IRRIGATED LANDS IN
KLAMATH RIVER HYDROGRAPHIC UNIT, 1958
(In acres)

Location number	Diversion name or owner	Pasture			Alfalfa hay and pasture	Grain		Hay	Truck and field crops	Orchard	Total lands irrigated	Idle	Fallow	Total
		Mixed	Native	Meadow		Grain								
						Barley	Wheat							
BEAVER CREEK SUBUNIT (Continued)														
M. D. B. & M.														
46N/9W-16H1	Bert C. Jackson	6			10					5	21			21
46N/9W-23L1	Elmer and Frank Lang	3			4					2	9	4		13
46N/9W-24D1	Circle Two Ranch	4									4			4
46N/9W-24E1	Circle Two Ranch				5						5			5
46N/9W-24E2	Circle Two Ranch				4						4			4
46N/9W-24F1	Circle Two Ranch				4						4			4
46N/9W-24F2	Circle Two Ranch				3						3			3
46N/9W-24K1	Circle Two Ranch				8						8			8
46N/9W-24L1	Circle Two Ranch				12						12			12
46N/9W-25A1	Circle Two Ranch				7						7			7
46N/9W-26B1	Elmer and Frank Lang	3								3	6			6
46N/9W-26K1	Elmer and Frank Lang	11									11			11
46N/9W-33F1	Virgil Roberts	13					10				23			23
46N/10W-23C1	LeRoy Bagley	4									4			4
47N/7W-31B1	R. Jennings				5						5			5
47N/7W-31E1	R. Jennings	6									6	9		15
47N/8W-19M1	William W. Mullin	3									3			3
47N/8W-30F1	Walter B. Stockett	7									7			7
47N/8W-31F1	Quigley-Lichens Ditch	28			24				2		54	1		55
47N/8W-31F1 46N/9W-13M1	Quigley-Lichens Ditch Circle Two Ranch	13			33						46			46

TABLE 8 (Continued)
IRRIGATED LANDS IN
KLAMATH RIVER HYDROGRAPHIC UNIT, 1958
(in acres)

Location number	Oiversion name or owner	Pasture			Alfalfa hay and pasture	Grain		Hay	Truck and field crops	Orchard	Total lands irrigated	Idle	Follow	Total
		Mixed	Native	Meadow		Barley	Wheat							
BEAVER CREEK SUBUNIT (Continued)														
M D B & M														
	47N/8W-32N1	Jesse R. DeAvilla	3								3	6		9
	47N/9W-24H1	Jesse R. DeAvilla Letha and Art Stanley										28		28
	47N/10W-26F1 (Seiad Valley Subunit)	Benjamin F. Maplesden St. Francis Investment Company	60								60			60
	Lands irrigated by ground water													
	Total Beaver Creek Subunit		322	0	0	226	10	0	9	2	579	12	0	662
CECILVILLE SUBUNIT														
	37N/10W-4N1	William S. Johnson	17								17			17
	37N/10W-5D1 38N/10W-32H1	Jordan Ditch Quaas Ditch	43	20							63			63
	37N/11W-3N1 37N/11W-9A1	Dennis Moody	6								6			6
	38N/11W-17L1	United States Klamath National Forest	4								4			4
	38N/11W-29D1	Shasta Mining Company	7								7			7
	38N/11W-30H1	Mrs. John N. McBroom	5								5			5
	39N/10W-31D1	Katarine C. George	27								27			27
	39N/12W-17B1	George R. and Robert G. Godfrey	32								32			32
	Total Cecilville Subunit		141	20	0	0	0	0	0	0	161	0	0	161

TABLE B (Continued)
IRRIGATED LANDS IN
KLAMATH RIVER HYDROGRAPHIC UNIT, 1958
(In acres)

Location number	Diversion name or owner	Pasture			Alfalfa hay and pasture	Grain		Hay	Truck and field crops	Orchard	Total lands irrigated	Idle	Fallow	Total
		Mixed	Native	Meadow		Barley	Wheat							
<u>M. D. B. & M.</u>														
47N/4W-1C1	F. L. and C. G. Lathrop		15								15			15
47N/4W-2C1	F. L. and C. G. Lathrop	16	6								22			22
48N/4W-34J1														
47N/4W-3M1	E. G. Lemas	28									28			28
47N/4W-9G1 (Hornbrook Subunit)	Silva-Linich Ditch													
47N/4W-9G1 (Hornbrook Subunit)	Silva-Linich Ditch	91	17								108			108
48N/3W-14D1	Hessig Ranch	98		3							101			101
48N/3W-14D2	Hessig Ranch	65									65			65
48N/3W-27N1	R. J. Brown	46			11						57	9		66
48N/3W-34G1	Hessig Ranch	86		6							92			92
48N/3W-35D1	Hessig Ranch	11									11			11
48N/4W-21C1	Warren Tormey		7								7			7
48N/4W-29N1	California-Oregon Power Company	15									15			15
48N/4W-33C1	J. Fugaalar	4	8								12			12
48N/4W-33H1														
48N/4W-35P1	F. L. and C. G. Lathrop	11	7								18			18

TABLE 8 (Continued)

 IRRIGATED LANDS IN
 KLAMATH RIVER HYDROGRAPHIC UNIT, 1958
 (In acres)

Location number	Oiversion name or owner	Pasture			Alfalfa hay and pasture	Grain		Hay	Truck and field crops	Orchard	Total lands irrigated	Idle	Fallow	Total
		Mixed	Native	Meadow		Barley	Wheat							
COPCO LAKE SUBUNIT (Continued)														
M D B & M														
48N/4W-36H1	F. L. and C. G. Lathrop	48									48			48
48N/4W-36L1	F. L. and C. G. Lathrop	28									28			28
48N/5W-25A1	California-Oregon Power Company	13									13			13
Total	Copco Lake Subunit	560	60	9	11	0	0	0	0	0	640	9	0	649
HAPPY CAMP SUBUNIT														
H B & M														
16N/7E-1H1	Earl K. Lee				8							3		3
16N/8E-17F1	Prentis C. Hale	9									17			17
17N/7E-4G1	David M. Huey	8									8			8
17N/7E-4P1	Paul G. Beck Charles Hockaday	4									4			4
17N/7E-5L1	Alice Sedros	6									6			6
17N/7E-7G1	Elmer E. McClimans	6								2	8			8
17N/7E-9E1	Alice Sedros	6	7							3	16			16
17N/7E-9E2	Lee C. Waddell		4								4			4
17N/7E-9E3	Guy Head	39			14						53			53
17N/7E-9E4														
17N/7E-16A2	Thomas Roberts	6	38								44			44
17N/7E-15N1														
17N/7E-16R1	Frank Attebery Alve Hockaday											10		10

TABLE 8 (Continued)
IRRIGATED LANDS IN
KLAMATH RIVER HYDROGRAPHIC UNIT, 1958
(In acres)

Location number	Diversion name or owner	Pasture			Alfalfa hay and pasture	Grain		Hay	Truck and field crops	Orchard	Total lands irrigated	Idle	Follow	Total
		Mixed	Notive	Meadow		Barley	Wheat							
<u>H B & M</u>														
17N/7E-26E1	Aubrey A. Hall	5			5						10			10
17N/7E-26P1	Arthur Attebery		4								4			4
17N/7E-34F1	Edward Head	7							3	2	12			12
17N/8E-17C1	Mrs. Felix H. McGinnis	4	3								7			7
18N/7E-32B1	W. H. Bussert	16									16			16
<u>M D B & M</u>														
46N/12W-30P1	Holly Thomas		12								12			12
47N/12W-32L1	R. T. Hamer	4									4			4
47N/12W-32P1	Chester H. Barton	<u>6</u>									<u>6</u>			<u>6</u>
Total	Happy Camp Subunit	126	68	0	27	0	0	0	3	7	231	13	0	244
<u>HORN BROOK SUBUNIT</u>														
46N/4W-15M1	Etta O. Ensele	53	13	12	211	16					305			305
46N/4W-15D1														
46N/4W-28J1	R. W. Thomason				35						35			35
46N/4W-32A1	Anthony J. Sylva												22	22
46N/4W-32B1	Anthony J. Sylva				7						7		5	12
46N/4W-33D1	Anthony J. Sylva				5						5		8	13
46N/5W-5L1	Donald E. and Avelyn L. Fehlman												83	83

TABLE 8 (Continued)
IRRIGATED LANDS IN
KLAMATH RIVER HYDROGRAPHIC UNIT, 1958
(In acres)

Location number	Division name or owner	Pasture			Alfalfa hay and pasture	Grain		Hay	Truck and field crops	Orchard	Total lands irrigated	Idle	Fallow	Total
		Mixed	Native	Meadow		Barley	Wheat							
HORN BROOK SUBUNIT (Continued)														
M D B & M														
46N/5W-7A1	Donald E. and Avelyn L. Fehlman				20						20			20
46N/5W-7H1	Alan Williams				48						48			48
46N/5W-14Q1	Russell Frederick	11			4						15			15
46N/5W-22M1	Benjamin H. Hager	68			74	196	39				377			377
46N/5W-27F1	Fred Reed				100						100			100
46N/5W-27A1	Fred Reed													
46N/5W-28R1	Clarence Kuck	26									26			26
47N/4W-8J1	J. W. Edwards	75									75			75
47N/4W-8Q1	J. W. Edwards	51									51			51
47N/4W-9F1	Cold Creek Ranch	187									187			187
47N/4W-18B1	Jones Ditch	354	8								362	21		383
47N/4W-18B3	Chessbrough	101									101			101
47N/4W-7J1	W. E. McKenzie													
47N/4W-18B4	Chessbrough J. M. Foster W. E. McKenzie		18								18	30		48
47N/4W-18E1	John B. Fitzgerald	34									34			34
47N/4W-18L1	J. N. Foster	55	14								69			69
47N/4W-18B2	Elsie Bloomingcamp													
47N/4W-18M1	J. N. Foster	23									23			23
47N/4W-18B2	Elsie Bloomingcamp													
47N/4W-18Q1	Elsie Bloomingcamp J. N. Foster	72									72			72
47N/4W-20M1	J. N. Foster	23									23			23
47N/4W-20P1	J. N. Foster													

TABLE 8 (Continued)
IRRIGATED LANDS IN
KLAMATH RIVER HYDROGRAPHIC UNIT, 1958
(In acres)

Location number	Diversion name or owner	Pasture			Alfalfa hay and pasture	Grain		Hay	Truck and field crops	Orchard	Total lands irrigated	Idle	Fallow	Total
		Mixed	Native	Meadow		Barley	Wheat							
HORN BROOK SUBUNIT (Continued)														
M D B & M														
47N/4W-20P1	J. N. Foster	5									5			5
47N/5W-11J1	John B. Fitzgerald	6									6			6
47N/5W-11M1	Mary Ann Quadros											13		13
47N/5W-12N1	John B. Fitzgerald	32									32			32
47N/5W-13G1	L. F. Smud	10									10			10
47N/5W-13G1 47N/4W-18B1	L. F. Smud Jones Ditch	6									6			6
47N/5W-13G1 47N/4W-18E1	L. F. Smud John B. Fitzgerald	13									13			13
47N/5W-14E1	Mary Ann Quadros Jess and Nelson Franklin	13									13			13
47N/5W-16D1	California-Oregon Power Company	9									9			9
47N/5W-17N1	James Liskey							8						
47N/5W-19A1	Lauran Paine	3								4				
47N/5W-19J1	Lauran Paine	22												
47N/5W-19P1	Kenneth Houston													
47N/5W-28H1	S. B. Cairns	9							13		2			15
47N/5W-30D1	Lem LeRoy Tull	9												9
47N/6W-6E1	Louis Alfonse	30												18
47N/6W-7E1	L. G. Robertson	9	4					13						30
47N/6W-17E1 47N/6W-17E2 47N/6W-18G2	G. M. Grieb G. M. Grieb L. G. Robertson								17					26 17

TABLE 8 (Continued)
IRRIGATED LANDS IN
KLAMATH RIVER HYDROGRAPHIC UNIT, 1958
(In acres)

Location number	Diversion name or owner	Pasture			Alfalfa hay and pasture	Grain		Hay	Truck and field crops	Orchard	Total lands irrigated	Idle	Fallow	Total
		Mixed	Native	Meadow		Barley	Wheat							
HORN BROOK SUBUNIT (Continued)														
M D B & M														
47N/6W-17F1	Ellis Ditch	6			23						29	5		34
47N/6W-17F1 47N/6W-21M1	Ellis Ditch Black Mountain Ranch Alfred W. Spearin				19						19			19
47N/6W-17Q1	C. F. Spearin				14						14			14
47N/6W-17N1 47N/7W-1F1	G. M. Grieb Cottonwood Irrigation and Mining Company	6						7			13			13
47N/6W-17D1	Bill Rogers Alfred W. and C. F. Spearin				15			2			17			17
47N/6W-18E1	Bob Commins	3			3						6			6
47N/6W-18G1	L. G. Robertson	1			5			26		8	40			40
47N/6W-18G2	L. G. Robertson									11	11			11
47N/6W-18J1	G. M. Grieb	15			16		2				33	12		45
47N/6W-19P1	Elmer and Robert Julien		12								12	48		60
47N/6W-20H1	Black Mountain Ranch				23						23			23
47N/6W-21M1	Black Mountain Ranch Alfred W. Spearin				21						21			21
47N/6W-25D1	Alfred A. Protsman	40									40			40
47N/6W-25H1	Alfred A. Protsman	26									26			26
47N/6W-27H1 47N/6W-27H2 47N/6W-21M1	Black Mountain Ranch Black Mountain Ranch Black Mountain Ranch Alfred W. Spearin	98			113	38					249			249
47N/6W-28C1	Black Mountain Ranch				26						26			26

TABLE 8 (Continued)
IRRIGATED LANDS IN
KLAMATH RIVER HYDROGRAPHIC UNIT, 1958
(In acres)

Location number	Diversion name or owner	Pasture			Alfalfa hay and pasture	Grain		Hay	Truck and field crops	Orchard	Total lands irrigated	Idle	Follow	Total
		Mixed	Native	Meadow		Barley	Wheat							
HORN BROOK SUBUNIT (Continued)														
M D B & M					31						31			31
47N/64-28F1 47N/64-28C1	Black Mountain Ranch Black Mountain Ranch													
47N/64-29E1 47N/74-24C1	Fred Draggoo Fred Draggoo Allen Jespersen	30			26						56			56
47N/64-33D1	George E. Callisch				22						22			22
47N/64-36A1	Louie Freitas	14									14		5	19
47N/74-1F1	Cottonwood Irrigation and Mining Company	39	20		159	27		19		4	268	18	6	292
47N/74-1F2	John Sylva	11									11			11
47N/74-1G1	Herman Kurt	15	12		2					2	31			31
47N/74-5G1	Walter Wreden	47									47			47
47N/74-12H1 47N/74-12H2	S. D. Haworth S. D. Haworth				13						13			13
47N/74-24C1	Fred Draggoo Allen Jespersen	102			1						103	41		144
48N/44-29N1 (Copco Lake Subunit)	California-Oregon Power Company	34									34			34
48N/54-21N1	Doan Madero		27								27			27
48N/64-31F1	Lawrence Lemos	3			8						11			11
48N/64-32M1	Lawrence Lemos	16			24						40			40
48N/74-15C1	F. L. Burns	36			11						47			47
48N/74-15C2 48N/74-15D1	F. L. Burns F. L. Burns	62	5								67			67
48N/74-15D1	F. L. Burns		10								10			10

TABLE 8 (Continued)
IRRIGATED LANDS IN
KLAMATH RIVER HYDROGRAPHIC UNIT, 1958
(In acres)

Location number	Diversion name or owner	Pasture			Alfalfa hay and pasture	Grain		Hay	Truck and field crops	Orchard	Total lands irrigated	Idle	Fallow	Total
		Mixed	Native	Meadow		Barley	Wheat							
HORN BROOK SUBUNIT (Continued)														
M D B & M			15								15			15
48N/7W-21C1	F. L. Burns										7			7
48N/7W-22R1	Homer C. Watson	7									36			36
48N/7W-34F1	Walter Wreden	49				33	19				101			101
Lands irrigated by ground water														
Total Hornbrook Subunit		2,005	158	12	1,122	310	60	75	0	27	3,769	188	129	4,086
KLAMATH GLEN SUBUNIT														
H B & M														
10N/4E-32C1	William Bow	34									34	12		46
10N/4E-32F1	Homer Cooper										6			6
14N/1E-28N1	R. L. Chaffey	6									124			124
Lands irrigated by ground water														
Total Del Norte County		130	0	0	0	0	0	0	0	0	130	0	0	130
Total Humboldt County		34	0	0	0	0	0	0	0	0	34	12	0	46
Total Klamath Glen Subunit		164	0	0	0	0	0	0	0	0	164	12	0	176
SALMON RIVER SUBUNIT														
10N/7E-2C1	Homer H. Bennett	5									5			5
10N/7E-4P1	Leo and Rose L. Brown	10									10			10
11N/7E-19H1	Ivan Charles John Martin	10									10			10
Total Salmon River Subunit		25	0	0	0	0	0	0	0	0	25	0	0	25
SAWYERS BAR SUBUNIT														
M D B & M														
40N/12W-13L1	John Ahlgren	9									9			9
Total Sawyers Bar Subunit		9	0	0	0	0	0	0	0	0	9	0	0	9

TABLE 8 (Continued)
IRRIGATED LANDS IN
KLAMATH RIVER HYDROGRAPHIC UNIT, 1958
(In acres)

Location number	Overseer name or owner	Pasture			Alfalfa hay and pasture	Grain		Hay	Truck and field crops	Orchard	Total lands irrigated	Idle	Fallow	Total
		Mixed	Native	Meadow		Barley	Wheat							
SCOTT BAR SUBUNIT														
M. D. B. & M.														
44N/11W-2B1	William Faulkner	13									13			13
44N/11W-2K1	Mrs. George Reeves	7									7			7
44N/11W-3M1	R. S. Smith	5				5				3	13			13
44N/11W-8R1	Gus Kleaver	8								4	8			8
45N/10W-15R1	Harry Krupa B. U. Nowdesha George Skillens	2									6			6
45N/10W-21E1	Scott Bar Community Water Association	15								3	18			18
45N/10W-22D1	Scott Bar Mining Co. Joseph Fournier	6									6			6
Total	Scott Bar Subunit	56	0	0		5	0	0	0	10	71	0	0	71
SEIAD VALLEY SUBUNIT														
46N/10W-3M1	V. B. Ward	7									7			7
46N/10W-3N1	V. B. Ward	11									11			11
46N/10W-5F1	Asa Robinson	7									7			7
46N/10W-5F2	Asa Robinson	18									18			18
46N/10W-5Q1	Asa Robinson	28									28			28
46N/10W-7G1	A. A. Morgan	19									19			19
46N/10W-8J1	Fred Rainey	45									45			45

TABLE 8 (Continued)
IRRIGATED LANDS IN
KLAMATH RIVER HYDROGRAPHIC UNIT, 1958
(In acres)

Location number	Diversion name or owner	Pasture			Alfalfa hay and pasture	Grain		Hay	Truck and field crops	Orchard	Total lands irrigated	Idle	Follow	Total
		Mixed	Native	Meadow		Barley	Wheat							
SEIAD VALLEY SUBUNIT (Continued)														
M D B & M														
46N/10W-9J1	V. B. Ward	7									7			7
46N/10W-9H1	C. Robert Rainey	11									11			11
46N/10W-9R2	C. Robert Rainey	59									59			59
46N/10W-15Q1	Chester H. Barton											14		14
46N/10W-21Q1	John N. Pickens	6												
46N/11W-5B1	W. W. Robinson, Jr.	6	3											8
46N/11W-5F1	R. G. Priddy		20											9
46N/11W-6G1	Stanley P. Schwartz		17											20
46N/11W-6Q1	Stanley P. Schwartz		12									6		17
46N/11W-7D1	Stanley P. Schwartz W. O. Simning	7	8											12
														15
46N/11W-18E1	H. C. Hammon		3									10		13
46N/11W-28A1	O'Neil Creek Ditch	7												3
46N/11W-35Q1	Hamburg Ditch	3	6											11
46N/11W-36R1	Kate Martin Rose R. McCulley	6								4				9
46N/12W-12F1	Fred Jensen	27												6
46N/12W-12H1	Loy Conrad Fred Jensen	21	4											27
														25
46N/12W-14C1 46N/12W-14E1	Grider Creek Club	8	23											31
46N/12W-14N1	J. Byer Norman Valpey	17	9											26

TABLE 8 (Continued)
IRRIGATED LANDS IN
KLAMATH RIVER HYDROGRAPHIC UNIT, 1958
(In acres)

Location number	Oiversion name or owner	Pasture			Alfalfa hay and pasture	Grain		Hay	Truck and field crops	Orchard	Total lands irrigated	Idle	Fallow	Total
		Mixed	Native	Meadow		Barley	Wheat							
SEIAD VALLEY SUBUNIT (Continued)														
M. D. B. & M.														
47N/10W-26F1	Benjamin F. Maplesden St. Francis Investment Company	29									29			29
47N/11W-32J1	W. W. Robinson, Jr.											3		3
Total Seiad Valley Subunit		349	105	0	2	0	0	0	0	4	460	33	0	493
SOMES BAR SUBUNIT														
H. B. & M.														
13N/65-33G1	L. H. Hayes	19									19			19
15N/7E-13G1	W. E. Lemon	15						5		1	21			21
15N/7E-13B1														
15N/8E-29K1	Ross Y. Kennedy	7									7			7
16N/7E-9F1	Hugh Wright	57									57			57
16N/7E-15F1														
16N/7E-16H1														
16N/7E-14N1	Dorothy Hill											15		15
Total Humboldt County		0	0	0	0	0	0	0	0	0	0	0	0	0
Total Siskiyou County		98	0	0	0	0	0	5	0	1	104	15	0	119
Total Seiad Valley Subunit		98	0	0	0	0	0	5	0	1	104	15	0	119

TABLE 8 (Continued)
IRRIGATED LANDS IN
KLAMATH RIVER HYDROGRAPHIC UNIT, 1958
(In acres)

Location number	Diversion name or owner	Pasture			Alfalfa hay and pasture	Grain		Hay	Truck and field crops	Orchard	Total lands irrigated	Idle	Fallow	Total
		Mixed	Native	Meadow		Barley	Wheat							
H B & M 11N/6E-20F1	Larry Knudsen Total Humboldt County Total Weitchpec Subunit	7									7			7
		<u>7</u>	<u>0</u>	<u>0</u>	<u>0</u>	<u>0</u>	<u>0</u>	<u>0</u>	<u>0</u>	<u>0</u>	<u>7</u>	<u>0</u>	<u>0</u>	<u>7</u>
		7	0	0	0	0	0	0	0	0	7	0	0	7
		<u>WEITCHPEC SUBUNIT</u>												
<u>WOOLEY CREEK SUBUNIT</u>														
(No diversions located in this subunit)														
Summary: Lands irrigated by surface water:	Del Norte County Humboldt County Siskiyou County	6	0	0	0	0	0	0	0	0	6	0	0	6
		41	0	0	0	0	0	0	0	0	41	12	0	53
		3,642	411	21	1,393	287	41	89	5	59	5,948	329	129	6,406
		<u>49</u>	<u>0</u>	<u>0</u>	<u>0</u>	<u>33</u>	<u>19</u>	<u>0</u>	<u>0</u>	<u>0</u>	<u>101</u>	<u>12</u>	<u>0</u>	<u>113</u>
Lands irrigated by ground water:	Del Norte County Humboldt County Siskiyou County	124	0	0	0	0	0	0	0	0	124	0	0	124
		0	0	0	0	0	0	0	0	0	0	0	0	0
		<u>49</u>	<u>0</u>	<u>0</u>	<u>0</u>	<u>33</u>	<u>19</u>	<u>0</u>	<u>0</u>	<u>0</u>	<u>101</u>	<u>12</u>	<u>0</u>	<u>113</u>
		3,862	411	21	1,393	320	60	89	5	59	6,220	353	129	6,702
Total Klamath River Hydrographic Unit														

CHAPTER IV. LAND CLASSIFICATION

Calculations of future water requirements will be based in a large part on a classification of lands with regard to their potential for irrigated agricultural and recreational development. The results of such a land classification survey in the Klamath River Hydrographic Unit are presented in this chapter.

Lands were not classified in this survey with respect to their potential for urban development. The use of lands for urban purposes is closely related to population at any given time, and it is planned to defer designation of these lands until estimates of population and related economic studies are made in connection with determinations of future water requirements.

The former Division of Water Resources made a reconnaissance classification of lands of the State, which was reported in State Water Resources Board Bulletin No. 2, "Water Utilization and Requirements of California," dated June 1955. A more detailed land classification survey was performed by the department and reported in Department of Water Resources Bulletin No. 58, and Bulletin No. 83. The entire area of the Klamath River Hydrographic Unit was included in Bulletin No. 83, and the Siskiyou County portion was included in Bulletin No. 58. The present investigation uses the same basic land classification survey which was used in Bulletins No. 58 and 83. However, additional data on classification of recreational lands have been included, along with some minor modifications to the irrigable agricultural lands and a remapping of the present urban lands.

Methods and Procedures

The general methods and procedures used in field mapping and tabulation of information were essentially the same as those described for the land use survey in Chapter III. An example of land classification delineations on an aerial photograph is shown on page 122.

The standards used in the classification of lands are given in detail in Table 9. Results of the land classification survey are shown on Plate 3, "Classification of Lands," Sheets 1 through 36. The totals of areas in each classification are listed in Table 10, page 123.

TABLE 9

LAND CLASSIFICATION STANDARDS

Land : class : symbol:	Characteristics
<u>Irrigable Lands</u>	
V	These lands are level or slightly sloping and vary from smooth to hummocky or gently undulating relief. The maximum allowable slope is 6 percent for smooth reasonably large-sized bodies lying in the same plane. As the relief increases and becomes more complex, lesser slopes are limiting. The soils have medium to deep effective root zones, are permeable throughout, and free of salinity, alkalinity, rock or other conditions limiting crop adaptability of the land. These lands are suitable for all climatically adapted crops.
H	These are lands with greater slope and/or relief than those of the V class. They vary from smooth to moderately rolling or undulating relief. The maximum allowable slope is 20 percent for smooth, reasonably large-sized bodies lying in the same plane. As the relief increases and becomes more complex, lesser slopes are limiting. The soils are permeable, with medium to deep effective root zones, and are suitable for the production of all climatically adapted crops. The only limitation is that imposed by topographic conditions.

TABLE 9 (Continued)

LAND CLASSIFICATION STANDARDS

Land : class : symbol:	Characteristics
------------------------------	-----------------

- M These are lands with greater slope and/or relief than those of the H class. They vary from smooth to steeply rolling or undulating relief. The maximum allowable slope is 30 percent for smooth, reasonably large-sized bodies lying in the same plane. As the relief increases and becomes more complex, lesser slopes are limiting. The soils are permeable, with medium to deep effective root zones, and are suitable for the production of all climatically adapted crops. The only limitation is that imposed by topographic conditions.

Any variation from the foregoing, as defined, is indicated by use of one or more of the following symbols:

- w Indicates the presence of a high water table, which in effect limits the present crop adaptability of these lands to pasture crops. Drainage and a change in irrigation practice would be required to affect the crop adaptability.
- s Indicates the presence of an excess of soluble salts or exchangeable sodium in slight amounts, which limits the present adaptability of these lands to crops tolerant to such conditions. The presence of salts within the soil generally indicates poor drainage and a medium-to-high water table. Reclamation of these lands will involve drainage and the application of small amounts of amendments and some additional water over and above crop requirements in order to leach out the harmful salts.
- ss Indicates the presence of an excess of soluble salts or exchangeable sodium in sufficient quantity to require the application of moderate amounts of amendments and some additional water over and above crop requirements in order to effect reclamation.
- h Indicates very heavy textures, which make these lands best suited for production of shallow-rooted crops.
- l Indicates fairly coarse textures and low moisture-holding capacities, which in general make these lands unsuited for the production of shallow-rooted crops because of the frequency of irrigation required to supply the water needs of such crops.
- p Indicates shallow depth of the effective root zone, which limits use of these lands to shallow-rooted crops.

TABLE 9 (Continued)

LAND CLASSIFICATION STANDARDS

Land : class : symbol:	Characteristics
r	Indicates the presence of rock on the surface or within the plow zone in sufficient quantity to prevent use of the land for cultivated crops.
<u>Urban Lands</u>	
UD	The total area of cities, towns, and small communities presently used for residential, commercial, recreational, and industrial purposes.
<u>Recreational Lands</u>	
RR	Existing and potential permanent and summer home tracts within a primarily recreational area. The estimated number of houses, under conditions of full development, is indicated by a number in the symbol, i.e., RR-3 is suitable for three houses per acre.
RC	Existing and potential commercial areas which occur within a primarily recreational area and which include motels, resorts, hotels, stores, etc.
RT	Existing and potential camp and trailer sites within a primarily recreational area.
P	Existing and potential county, state, federal, and private parks, race tracks, and fairgrounds.
<u>Miscellaneous Lands</u>	
F	Presently forested lands, or lands subject to forest management, which meet the requirements for irrigable land but which, because of the climatic conditions and physiographic position, are better suited for timber production or some type of forest management program rather than for irrigated agriculture.
Vm	Swamp and marsh lands which usually support a heavy growth of phreatophytes and are covered by water most of the time.
N	Includes all lands which fail to meet the requirements of the above classes.

Major Categories of Land Classes

The lands mapped can be grouped into four major categories:

(1) irrigable lands, (2) urban lands, (3) recreational lands, and

(4) miscellaneous lands, which are those lands which fail to meet the requirements of the first three land class categories.

Irrigable Lands

Irrigable lands are grouped in appropriate classifications according to their suitability for development under irrigated agriculture and their crop adaptability. Presently irrigated lands are included within these classifications, but urban lands and recreational lands are not classed as to irrigability. The time element with respect to when the lands might be developed did not enter the determination, except that suitability for irrigated agriculture was necessarily considered in light of present agricultural technology.

There are many factors which influence the suitability of land for irrigation development. Since soil characteristics and the physiography of the landscape are the stable of these factors, they were the only ones considered in the survey in classifying lands as to their irrigability. The characteristics of the soil were established by examination of road cuts, ditch banks, and the material from test holes, together with observations of the type and density of native vegetation and crops. Representative slopes throughout the area were measured with a clinometer. Other aspects such as those economic factors related to the production and marketing of climatically adapted crops, the location of lands with respect to a water supply, and climatic conditions were not considered in the basic classification. These latter factors are very important in estimating the nature of future cropping patterns and practices and will be given due consideration when estimates are made of future water requirements.

Urban Lands

It is recognized that future urban expansion will encroach upon some of the irrigable lands. The location and extent of this type

of development is a function of many variables. Because this land classification survey is an inventory of relatively unchanging physical conditions, no attempt was made to locate the areas of urban encroachment. Therefore, only those lands devoted to urban uses in 1958 are designated as "urban" lands.

Recreational Lands

Present trends indicate an expanding rate of use and demand for recreational facilities throughout the State. In view of these trends and the ever-increasing population, it is recognized that there will be a demand for substantial land areas for recreational purposes. This is particularly true of the mountainous regions where this type of development is expanding rapidly at the present time.

Generally speaking, all mountainous lands are suitable for some recreational use such as hunting, fishing, and similar outdoor activities. However, for purposes of this survey, lands classified for recreational use were limited to those which are now, or may in the future be used intensively for permanent and summer home tracts, camp and trailer sites, and parks outside of urban areas. These are lands requiring intensive water service.

Primary considerations for classification of home tracts and camp and trailer sites were such physical factors as soil depth, slope, and rockiness; such aesthetic values as view, nearness to lakes or streams, or density and type of forest canopy suitable for the respective uses; and the plans of United States and State forest officials. An important factor in location of camp and trailer sites is the availability of a water supply, but isolation from existing roads did not influence site selection.

There are no existing federal or state parks within the Klamath River Hydrographic Unit.

Miscellaneous Lands

Presently forested lands or lands best suited for forest management which are otherwise irrigable are classed as "F" lands. Lands which were designated in the land use survey as marsh lands are classified as "Vm" lands.

Lands which failed to meet the requirements previously described in this chapter, are herein called "Other Lands" and amounted to approximately 2,037,120 acres or 95 percent of the unit. These "Other Lands" are not shown on Table 10.



Example of Land Classification Delineated on Aerial Photograph

(See Table 9 for symbol explanation.)

TABLE 10
CLASSIFICATION OF LANDS IN
KLAMATH RIVER HYDROGRAPHIC UNIT
(In acres)

Subunit and County	Irrigable agricultural lands															Present urban lands, 1958	Recreational lands					Miscellaneous lands		
	Smooth lying					Gently sloping					Steeply sloping						Total	RR	RC	RT	PP	Total	F	Vm
	V	Vw	Vh	Vi	Vp	Vpr	Vt	H	Hp	Hpr	Hr	M	Mp	Mpr	Mr									
Applegate River Siskiyou County	10	310	0	0	0	0	0	0	0	0	0	0	0	0	0	320	0	10	0	10	0	20	370	0
Beaver Creek Siskiyou County	430	70	0	0	0	20	150	480	10	10	120	580	10	0	110	1,990	10	90	20	180	0	290	3,380	0
Cecilville Siskiyou County	30	520	0	0	0	0	10	170	0	0	40	240	0	0	10	1,020	0	450	10	570	0	1,030	3,620	0
Copco Lake Siskiyou County	390	190	0	0	30	0	200	230	120	10	60	0	80	50	0	1,360	20	0	0	390	0	390	18,640	0
Happy Camp Siskiyou County	220	220	0	0	0	0	10	1,030	0	0	530	190	0	0	0	2,180	350	550	20	150	0	720	2,990	0
Hornbrook Siskiyou County	3,310	50	60	0	780	0	130	3,300	8,070	620	130	170	8,850	270	160	25,900	350	0	40	10	0	50	3,740	20
Klamath Glen Del Norte County	1,610	160	0	40	0	0	150	310	0	0	50	60	0	0	0	2,380	500	120	60	320	230	730	4,070	40
Rumboldt County	80	10	0	0	0	0	30	310	0	0	20	90	0	0	0	540	20	120	0	40	740	900	7,750	0
Salmon River Siskiyou County	10	320	0	0	0	0	0	150	0	0	40	50	0	0	50	620	0	110	0	70	0	180	560	0
Savoyers Bar Siskiyou County	0	500	0	0	0	0	0	130	0	0	0	40	0	0	0	670	60	80	0	590	0	670	1,780	0
Scott Bar Siskiyou County	40	360	0	0	0	0	50	160	0	0	80	70	0	0	10	770	10	270	20	430	0	720	3,040	0
Seiad Valley Siskiyou County	830	180	0	0	30	0	60	650	10	0	30	380	0	0	0	2,170	60	380	30	120	0	530	930	0
Somesbar Rumboldt County Siskiyou County	10 100	0 1,040	0 0	0 0	0 0	0 0	0 60	0 620	0 0	0 0	0 160	0 120	0 0	0 0	0 10	10 2,110	0 20	10 580	0 90	40 860	0 0	50 1,530	210 4,590	0
Wetchepec Del Norte County	0	10	0	0	0	0	0	0	0	0	0	0	0	0	0	10	0	0	0	30	0	30	120	0
Rumboldt County Siskiyou County	70 0	20 0	0 0	0 0	0 0	0 0	0 460	0 0	0 0	0 0	0 0	110 0	0 0	0 0	0 0	660 0	100 0	660 0	70 0	1,210 120	0 0	1,940 120	2,420 230	10 0
Woolley Creek Siskiyou County	20	660	0	0	0	0	0	0	0	0	0	0	0	0	0	680	0	0	0	30	0	30	1,450	0
Del Norte County	1,610	170	0	40	0	0	150	310	0	0	50	60	0	0	0	2,390	500	120	60	350	230	760	4,190	40
Rumboldt County	160	30	0	0	0	0	30	770	0	0	20	200	0	0	0	1,210	120	790	70	1,290	740	2,890	10,380	10
Siskiyou County	5,390	4,400	60	0	840	20	670	6,920	8,210	670	1,190	1,840	8,940	320	350	39,790	880	2,520	230	3,530	0	6,280	45,320	20
TOTALS	7,160	4,600	60	40	840	20	850	8,000	8,210	640	1,260	2,100	8,940	320	350	43,390	1,500	3,430	360	5,170	970	9,930	59,890	70

CHAPTER V. SUMMARY

The Klamath River Hydrographic Unit consists of 234 square miles of Del Norte County, 523 square miles of Humboldt County, and 2,605 square miles of Siskiyou County. It includes the watersheds of the Klamath River, the Salmon River, and the lower 20 miles of the Scott River.

Valley and foothill lands constitute about 2 percent of the total area. Approximately 54 percent of the agricultural lands are dry-farmed, 46 percent are irrigated. Major irrigated crops are pasture and grain. Lumbering and associated wood products manufacturing are the most important local industries.

Water Use

Water rights in Seiad Valley have been adjudicated by legal action and others have been defined by private agreements. The remaining use is based primarily on riparian rights or on appropriative rights established prior to 1914 by merely diverting and using the water.

As of June 30, 1960, there were 247 active applications to appropriate water in the unit on file with the State Water Rights Board. Permits or licenses were granted for 234 of these applications and 13 were incomplete.

Approximately 71 percent of the 279 surface water diversions located were measured during 1958. The primary use and the amounts diverted are summarized as follows.

<u>Primary use</u>	<u>Total number of diversions located</u>	<u>Number of diversions measured</u>	<u>Measured diversions (in acre-feet)</u> ^{1/}
Irrigation	217	148	62,300
Municipal	4	3	2,500
Industrial	10	7	8,300
Mining	17	16	25,200
Power	19	13	1,933,200
Domestic	12	5	1,500
	<hr/>	<hr/>	<hr/>
TOTAL	279	192	2,033,000

1/Partially estimated.

The total consumptive use of applied water during 1958 is estimated to have been 12,240 acre-feet, of which 10,300 acre-feet were used for irrigated agriculture, 940 acre-feet for domestic and municipal purposes and 1,000 acre-feet for industrial purposes in the production of wood products.

Land Use

The areas of present land uses within the Klamath River Hydrographic Unit are summarized below and presented pictorially in Figure 1, page 128.

<u>Use</u>	<u>Area, in acres</u>
Agriculture	
Lands irrigated in 1958	6,220
Lands normally irrigated but idle or fallow in 1958	480
Dry-farmed lands	<u>13,240</u>
Total agriculture	19,940
Recreational lands	2,100
Urban lands	1,500
Meadowlands	4,600
Marsh lands	70
Native vegetation	<u>2,123,690</u>
Total area of unit	2,151,900

Land Classification

The land classification survey reported in Department of Water Resources Bulletins No. 58 and 83 was used in this investigation, with additional data on classification of recreational lands, some minor modifications to the irrigable agricultural lands, and a resurvey of present urban lands. The results of these surveys are summarized below and presented pictorially in Figure 2.

<u>Classification</u>	<u>Area, in acres</u>
Irrigable agricultural lands	43,390
Present urban lands	1,500
Recreational lands	9,930
Miscellaneous lands	
Irrigable forest management lands	59,890
Other lands (including Vm lands)	<u>2,037,190</u>
Total area of unit	2,151,900

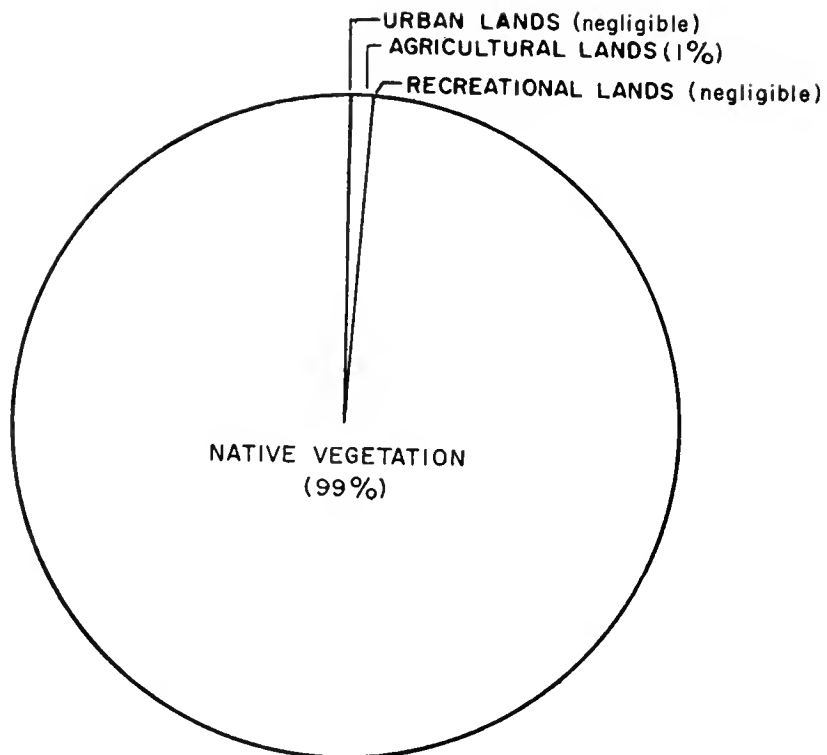


Figure 1
1958 LAND USE

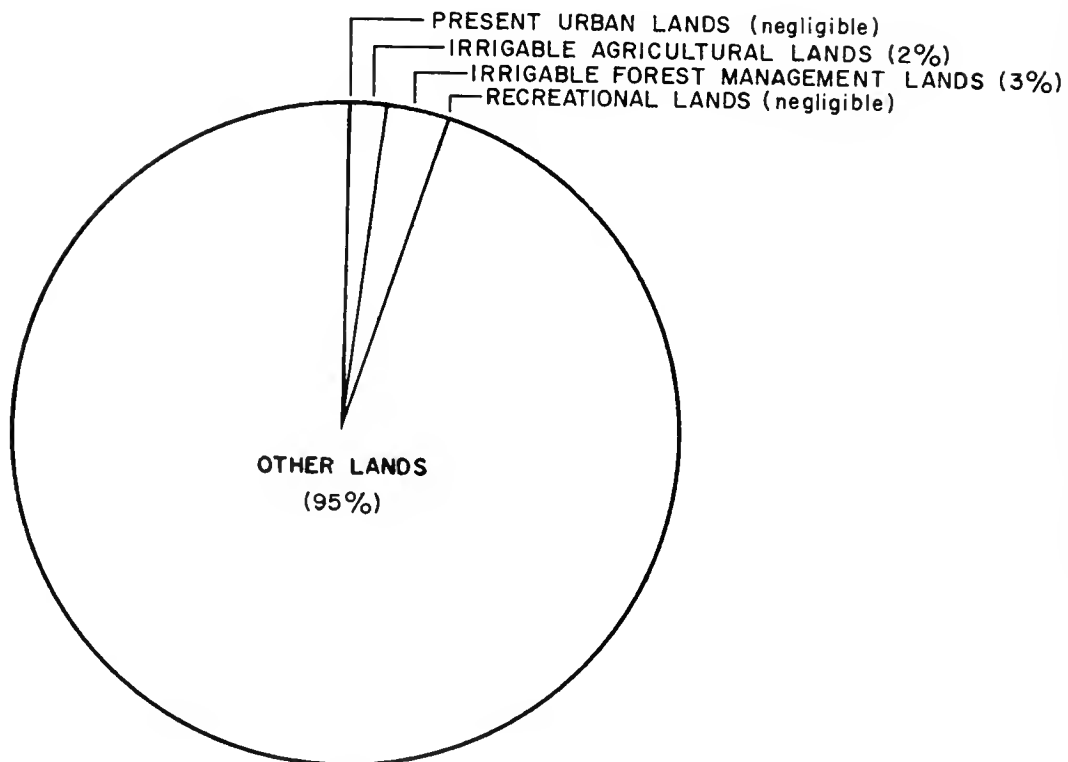


Figure 2
CLASSIFICATION OF LANDS

APPENDIX A

STATEWIDE WATER RESOURCES AND WATER
REQUIREMENTS PROGRAM

APPENDIX A

STATEWIDE WATER RESOURCES AND WATER REQUIREMENTS PROGRAM

California's major water problem today is that of development and delivery of supplemental water supplies to meet increasing water requirements throughout the State. The problem involves (1) the regulation of seasonal and cyclic fluctuation of streamflow to meet demand schedules in the areas of origin, and (2) the transmission of regulated surplus flows over long distances to areas of deficiency. The development and long distance transfer of water is currently accomplished by such major facilities as the federal Central Valley Project and the Colorado River Aqueduct of The Metropolitan Water District of Southern California. However, such development and transfer will be considerably broadened in scope by the State Water Facilities.

Consumptive water requirements of the State on a basinwide basis were estimated in State Water Resources Board Bulletin No. 2, "Water Utilization and Requirements of California," June 1955. However, to provide for local water needs while considering specific export projects, more detailed information must be made available on present and projected future water requirements of the areas in which the projects are to be built. This will necessitate the considerably more detailed collection and analysis of data on hydrology, land use and land capability, and economics.

Recognizing that additional information is needed if the water needs of areas of origin are to be adequately protected in large-scale water development projects, the 1956 Legislature authorized an investigation to determine the water resources and water requirements of

the respective watersheds in the State. The authorization is contained in Chapter 61, Statutes of 1956, as amended by Chapter 2025, Statutes of 1959. This legislation is codified in Section 232 of the Water Code as follows:

"232. The Legislature finds and declares that in providing for the full development and utilization of the water resources of this State it is necessary to obtain for consideration by the Legislature and the people, information as to the water which can be made available for exportation from the watersheds in which it originates without depriving those watersheds of water necessary for beneficial uses therein. To this end, the department is authorized and directed to conduct investigations and hearings and to prepare findings therefrom and to report thereon to the Legislature at the earliest possible date with respect to the following matters:

(a) The boundaries of the respective watersheds of the State and the quantities of water originating therein;

(b) The quantities of water reasonably required for ultimate beneficial use in the respective watersheds;

(c) The quantities of water, if any, available for export from the respective watersheds;

(d) The areas which can be served by the water available for export from each watershed; and

(e) The present use of water within each watershed together with the apparent claim of water right attaching thereto, excluding individual uses of water involving diversions of small quantities which, in the judgment of the Director of Water Resources, are insufficient in the aggregate to materially affect the quantitative determinations included in the report.

"Before adopting any findings which are reported to the Legislature, the department shall hold public hearings after reasonable notice, at which all interested persons may be heard."

For purposes of this inventory, the State has been divided into 12 major hydrographic areas. These areas, in turn, have been subdivided into hydrographic units generally comprising watersheds of individual rivers.

Basic data on present water uses, together with the apparent claim of water right attached thereto, present land uses, history of land and water uses, and the classification of lands will be presented separately for each hydrographic unit in this series of reports on land and water use. Bulletin No. 94-6, "Land and Water Use in Klamath River Hydrographic Unit", is the sixth of a series reporting the results of these surveys.

At a future date, estimates, largely based on the land and water use surveys, will be made of quantities of water reasonably required for future beneficial uses in each watershed. The quantity of water potentially available for export from each watershed will be determined after allowances are made for the satisfaction of the local requirements and prior rights to divert water to other areas. For those watersheds in which no exportable water is available the water supply deficiency will be determined. These estimates will be published as they become available.

The calculations of future water requirements will be based, in part, on predicted future land uses derived from land classification surveys, economic studies, population forecasts, industrial and agricultural development, and recreational needs. Agricultural water requirements will be based on unit water use by the various predicted crop types. Urban and recreational requirements will be based on per capita water use values. Fish and wildlife requirements will be based on minimum streamflow needed or on water demands for wildlife area. Industrial water requirements will be based on measured water deliveries to various types and sizes of industries now existing. In forecasting future industrial development, water quality problems will be given full consideration.

Water resources will be determined from records of all stream gaging stations, including new stations which were established for this and other investigations of the department. The new stations were generally constructed on streams which originate in the smaller watersheds for which runoff data are necessary but for which no data have been available.

APPENDIX B

**REPORTS ON RELATED INVESTIGATIONS
AND OTHER REFERENCES**

APPENDIX B

REPORTS ON RELATED INVESTIGATIONS AND OTHER REFERENCES

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LAND AND WATER USE BULLETINS

Bulletin No. 94 Series

Bulletin No.	Hydrographic Unit Covered	Year of Survey
94-1	Tule River	1957
94-2	Trinity River	1957
94-3	Yuba-Bear Rivers	1957-58
94-4	Smith River	1958
94-5	Shasta-Scott Valleys	1958
94-6	Klamath River	1958
94-7	Mad River-Redwood Creek	1958
94-8	Eel River	1958-59
94-9	Lost River-Butte Valley	1959
94-10	Mendocino Coast	1959
94-11	Russian River	1959
94-12	Sacramento Valley West	1959
94-13	Putah-Cache Creeks	1960
94-14	American River	1960
94-15	Sacramento Valley Floor	1961
94-16	Sacramento Valley Northeast	1962
94-17	Feather River	1962-63
94-18	Shasta Lake	1963

Bulletins Similar to the Bulletin 94 Series

Bulletin No.	County or Drainage Area Covered	Year of Survey
70	Orange County	1964
71	Upper Santa Ana River Drainage	1964
101	Desert Areas of Southeastern California	1958
102	San Diego County	1963
103	San Luis Obispo and Santa Barbara Counties	1959
24-50	Coastal Los Angeles County	1960
121	Southern Lahontan Area	1961
122	Ventura County and Upper Santa Clara River Drainage	1961

APPENDIX C
LEGAL CONSIDERATIONS

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APPENDIX C
LEGAL CONSIDERATIONS

There are set forth in the following paragraphs brief general statements with respect to the California law of water rights to supplement and to provide a background for information on water rights contained in Chapter II. Also included is a review of litigation involving water rights and a tabulation of currently valid applications to appropriate water within the Klamath River Hydrographic Unit filed with the State Water Rights Board.

California Water Rights

In California, water rights convey only the right to use water. Until absolute possession of water is acquired by some artificial means, no one owns water. However, the owner of water rights is entitled to enjoy them without interference by other users who have rights which are inferior to his.

Five kinds of water rights are recognized in California. These are riparian, overlying, appropriative, prescriptive, and pueblo. Riparian rights attach to surface water and water flowing in known and definite subterranean channels, while overlying rights attach only to underground water. Appropriative and prescriptive rights may be acquired in either surface or underground waters. Pueblo rights are now exercised in California only by the cities of Los Angeles and San Diego, each of which has a paramount right to satisfy its full needs from the stream system of waters flowing by the former Mexican pueblo from which each sprang.

All water rights, both to surface and to underground water, are subject to the doctrine of reasonable beneficial use expressed in Section 3

of Article 14 of the California Constitution, and Water Code Sections 100 and 101. This doctrine limits water rights to the quantity of water reasonably required for beneficial use and prohibits waste, unreasonable use, and unreasonable methods of use or diversion.

Riparian Rights

A riparian right entitles the owner of lands which border or front on a watercourse to take water therefrom for use on such lands within the same watershed. However, the rights of the owner of riparian land are limited to the reasonable beneficial use of the natural flow of water which passes his land. Riparian rights pass with the title to the land, unless expressly reserved or excepted from the interests transferred, and are not gained by use or lost by mere nonuse. Although the land must be contiguous to the watercourse, the length of the frontage is not determinative of the rights; a large tract with a small frontage on a stream may be riparian to the stream. But the original grant determines the character of the land, and only the smallest contiguous tract held under a single title retains riparian rights.

A riparian owner has no right to any specified amount of the water of a stream as against other riparian owners. He has rights only to a reasonable share from the stream -- a correlative right which he shares mutually with other riparian owners. In the event of insufficient water for all, the available supply must be apportioned, except that an upper riparian owner may take the whole supply if necessary for domestic use. As against appropriators, the riparian owner has the paramount right to all the water of the stream which he can put to reasonable beneficial use, but that is the extent of his right, and the appropriator can take the surplus.

Riparian rights do not authorize use of water on nonriparian land, nor do they permit the seasonal storage of water. Neither do they prevent temporary appropriation by others of water not presently needed for use on riparian land.

A parcel of land becomes nonriparian when severed from land bordering the stream, unless the riparian rights are reserved for the severed parcel by the grantor. Riparian rights may be destroyed when purportedly transferred apart from the land by grant, contract, or condemnation, and may be impaired or lost through prescription.

Overlying Rights

Owners of lands overlying a common underground water supply have the right to withdraw water for reasonable beneficial use on their overlying lands. Such overlying rights are analogous to riparian rights, in that both are based on ownership of land, and the rights of each overlying owner are mutual and correlative to the rights of all other owners. In the case of insufficient water to fully supply the requirements of all, the available supply must be equitably apportioned.

Overlying rights do not include use of water on nonoverlying land. However, surplus water not presently required for beneficial use on overlying land, and which may be withdrawn without creating an overdraft on the ground water supply, may be appropriated for use on nonoverlying land. But the overlying rights are paramount and all appropriative rights are subject to the future requirements of overlying land.

Appropriative Rights

An appropriation of water is any taking of water for other than riparian or overlying uses, whether such taking is from the underground by

wells or from surface streams by direct diversion or storage. An appropriator, in the legal sense, is one who initially takes water without possessing rights which are based on the ownership of land. As between appropriators, the one first in time is the first in right. A prior appropriator may take all the water he needs up to the full amount to which he is entitled before a later appropriator may take any.

Normally, appropriative rights are inferior to riparian rights. An exception to this is the case of an appropriation of water diverted from streams flowing through vacant public lands before the riparian lands were withdrawn from the domain of the United States. The appropriative diversions or the lands they serve may be either upstream or downstream from the riparian lands. Any water not needed for the reasonable beneficial uses of those having prior rights may properly be appropriated.

No formal or statutory procedure is or ever has been prescribed or required in this state for those who take water by means of wells from underground percolating waters or underground basins. An appropriative right to take surplus water from such sources is acquired by extracting such water from the underground and applying it to beneficial uses.

Provided the development and application to use are completed with reasonable diligence, the priority of the right as against another appropriator relates back to the first substantial act toward putting the water to use or to the date of application. Until 1872, water flowing in natural streams was appropriated by taking the water.

Sections 1410 through 1422 of the Civil Code, enacted in 1872, established a permissive procedure for perfecting an appropriation of surface water. Provision was made for posting a notice of appropriation at the proposed point of diversion and recording a copy with the county recorder. If the statutory

procedure were followed and the appropriation completed with due diligence, priority related back to the date of posting; otherwise, priority was established only when the water was put to beneficial use.

Since the effective date of the Water Commission Act of 1913, December 19, 1914, appropriation of surface water and water in subterranean streams flowing in known and definite channels has been by compliance with required statutory procedure. An appropriation of such water now can be made in accordance with the provisions of Part 2, Division 2 of the Water Code (Water Code Sections 1200 to 1801). An application to appropriate unappropriated water must be filed with the State Water Rights Board. If the application is approved, a permit is issued authorizing the appropriation. When the appropriation has been completed, an inspection is made and a license is issued, to the extent of beneficial use, provided the terms and conditions of the permit have been fulfilled. The priority of a permit or license relates back to the date of the application.

A right to appropriate water may be lost either by abandonment or by continuous nonuse. To constitute abandonment, there must be concurrence of act and intent, wherein possession is relinquished with no intent to resume it for a beneficial use. Abandonment is, therefore, always voluntary and factual. In the case of an appropriation initiated prior to 1914, continuous nonuse for a period of five years results in the loss of appropriative water rights. In the case of appropriative rights acquired pursuant to the Water Commission Act or the Water Code, continuous nonuse for a period of only three years may result in loss of such rights.

Where ground water and surface water are interconnected, one acting as a tributary to the other, both are treated as part of a common supply and users of water from either source are entitled to protection from substantial

injury as a result of use by others of water from the other source. Thus, an owner of land riparian to a stream may have his right to the use of water protected against impairment by an appropriator of percolating ground water tributary to the stream and required for the maintenance and support of its flow. Likewise, where water from a stream percolates to a ground water basin or stratum, the owner of land overlying the ground water supply may be protected from an appropriation of water from the stream if this causes a substantial impairment of the ground water supply. As between riparian use of surface water and overlying use of ground water tributary to the stream, a sharing of the available water supply on the basis of reasonable beneficial use should be made.

Prescriptive Rights

It is possible to appropriate surface or ground water which is presently needed by others to satisfy riparian, overlying, or prior appropriative rights. Such appropriations may ripen into prescriptive rights where the use is actual, open and notorious, hostile and adverse to the original owners, continuous and uninterrupted for the statutory period of five years, made under claim of right, and with payment of taxes whenever such have been levied on the water rights. Absence of any of these essentials precludes the acquisition of prescriptive water rights.

Prescription of a right thus requires that, for a period of five years, the rightful owner either knows or should know of the adverse taking and fails to take any physical or legal steps to interrupt such taking. Irrespective of the needs or demands of the riparian, overlying, or prior appropriative user, an absolute right to only a fixed amount of water may be

acquired by prescription. The quantity of such a right is determined by beneficial use. However, present use is the measure of the prescriptive right, and future needs cannot be included.

Riparian rights, overlying rights, appropriative rights, and prescriptive rights may be lost or diminished by prescription. While there is sufficient water flowing in a stream to supply the wants of all parties, the use of the water by anyone does not deprive the others of their water supply and, hence, is not an invasion of their rights. The same principle applies to a downstream diversion of water as against the rights of an upstream riparian landowner or prior appropriator. At times when the safe yield of a ground water basin exceeds the needs of overlying landowners and appropriators, their prior rights are not invaded by a later appropriative taking of water from the underground supply. The later appropriation becomes adverse only when the ground water basin is overdrawn; that is, when the annual draft exceeds the safe annual yield. Although neither an overlying owner nor a prior appropriator may prevent a taking of surplus water, either the owner or the appropriator may institute legal proceedings to safeguard the supply once a surplus ceases to exist, and may enjoin any additional use beyond the point of safe yield. Since prescriptive rights can only be acquired to non-surplus water, these rights cannot ordinarily be acquired against the future needs of riparian or overlying owners.

The prior appropriator, lower riparian, or overlying owner may protect his rights for his present needs against an adverse appropriator by actually taking the needed water before the five-year period has run, or by the aid of the courts in the form of a declaratory judgment or injunction within the five-year period.

Determination of Water Rights

Under provisions of the Water Code, actions brought before either state or federal courts which involve determination of rights to the use of water may, at the court's discretion, be referred to the State Water Rights Board. Under provisions of Water Code Section 2000, the court may appoint the board to referee "any or all issues involved in the suit", or under Section 2001, it may limit the reference to "investigations of and report upon any or all physical facts involved". This reference procedure may be followed in suits involving either surface or ground waters, or both.

An alternative procedure for adjudication of rights to the use of water of streams, lakes, and other bodies of water, is available upon petition to the State Water Rights Board, but the method excludes the determination of rights to take water from an underground supply other than from a subterranean stream flowing through known and definite channels. Water Code Sections 2500 to 2900, inclusive, authorize the initiation of such proceedings.

Court actions which involve a determination of all the relative rights to the use of water of an entire stream or stream system and/or ground water basin afford a basis for distribution of water after decrees under watermaster service. Water users may secure the services of the Department of Water Resources under Water Code Sections 4000 to 4407, inclusive, in making distribution of the water to them according to their respective rights as determined by the court.

Of the adjudications of water rights in the Klamath River Hydrographic Unit, which are described below, none has involved references to the State Water Rights Board or its predecessor agencies, nor has any state watermaster service been established.

Litigation Concerning Local Water Rights

Seiad Creek Adjudications

The first legal proceedings in the history of conflict in the matter of use of water from Seiad Creek and its tributaries were entered on June 18, 1919, in the case of Ariel Lowden vs Davis and Davis, Superior Court, Siskiyou County. No. 7484, in which the rights between the plaintiff and defendants were then determined.

Subsequent conflict was evidenced by the number of protests filed against Application No. 1539 issued on November 28, 1919, and numerous other complaints relative to the use of water of Seiad Creek received by the Department since that time.

Litigation was again commenced in 1941 in an action entitled "Arroyo Seco Gold Dredging Company vs Shadburne", Superior Court, Siskiyou County, No. 11044, in which all the claimants on the stream system were eventually brought into the case.

The case was allowed to lapse in 1946 and on December 23, 1946, a petition for the determination of the rights of the claimants, under Sections 2500 to 2865, inclusive, of the Water Code, signed by the plaintiff and defendants and a substantial majority of the claimants on the stream system, was submitted to the Department (then the Division of Water Resources).

The petition was granted on January 28, 1947, and an examination and field investigation were conducted on streamflows of the Seiad Creek system, of diversion systems from the stream, of lands irrigated and irrigable therefrom, of all other uses of water and other data and information essential to the proper determination of the rights and of the use of water by the claimants.

A trial distribution of water was conducted during the 1948 irrigation season and continued through the 1949 season, upon which agreement was

reached by the parties involved and entered into by all the claimants on April 21, 1949.

A report of these proceedings, dated October 31, 1949, is on file with the State Water Rights Board in Book 2, Order of Determinations starting on page 105.

Klamath River Basin Compact

The development and use of water from the Klamath River, an interstate stream, is subject to the Klamath River Basin Compact between California and Oregon. This agreement was negotiated by California pursuant to the authority conferred by Chapter 1473, California Statutes of 1953, page 3085. It was ratified by both states on April 17, 1957, consented to by Congress on August 30, 1957 (71 Stat. 497), and became effective on September 11, 1957. The Compact has been codified in the California Water Code as Sections 5900-5901.

The compact permits development in the upper basin that may impair or alter the regimen of the river flow into California. Under certain conditions of the compact, additional land may be developed in the upper basin with a superior right to water with respect to claim of rights downstream initiated subsequent to the effective date of the compact. The extent that development will be accomplished to use water under claim of this superior right cannot be determined at this time.

Applications to Appropriate Water

Applications to appropriate water within the Klamath River Hydrographic Unit filed with the State Water Rights Board and active on June 30, 1960, are summarized in Table C-1, page C-12. Diversion identification numbers, explained in Chapter II, are shown corresponding to the appropriate application where a significant diversion was made under the application.

TABLE C-1
APPLICATIONS TO APPROPRIATE WATER IN
KLAMATH RIVER HYDROGRAPHIC UNIT
(Filed with State Water Rights Board as of June 30, 1960)

Application Number	Date Filed	Present Owner	DWR Diversion Number	Source	Location of Point of Diversion				Amount	Period of Diversion	Purpose	Status*
					1/4	1/4	Sec.	Tp.	R.	B. & M.		
156	10/9/15	William B. Bishop	--	East Fork of Taylor Creek	NE	S4	12	38N	11W	MD	Mining	L-108
583	2/5/17	William B. Bishop	--	Taylor Creek	NW	S4	12	38N	11W	MD	Mining	L-119
1134	12/2/18	Jess R. Deavilla	47N/9W-24H	Beaver Creek	SW	NW	19	47N	8W	MD	Irrigation, 65 acres	L-1351
1942	7/28/20	State of California Department of Fish and Game	--	Fall Creek	SW	NW	30	48N	4W	MD	Fish culture	L-335
1943	7/28/20	State of California Department of Fish and Game	--	Fall Creek	SW	NW	30	48N	4W	MD	Fish culture	L-336
1944	7/28/20	State of California Department of Fish and Game	--	Fall Creek	SW	NW	30	48N	4W	MD	Fish culture	L-337
2226	2/21/21	J. L. and W. H. Lichens, M. W. Caliper, George L. Bath, Alice, and Clyde O. Smith, and Albert R. Hegler	47N/8W-31F	Beaver Creek	SE	NW	31	47N	8W	MD	Domestic Irrigation, 237 acres	L-1163
2863	6/3/22	Manuel, Ernest, and Andrew Lewis	--	Mawah Creek	NE	NE	12	10N	3E	H	Irrigation, 13 acres	L-858
2973	8/8/22	Etta O. Eneale	46N/4W-15D	Parker Camp Canyon tributary to Bogus Creek	NE	NW	15	46N	4W	MD	Irrigation, 504.5 acres	L-913
3035	8/31/22	E. L. Wright	--	Tributary to Bluff Creek	NW	NW	12	10N	4E	H	Irrigation, 12 acres	L-2997
3058	9/8/22	Estate of George A. Milne	--	Musick Creek	SE	SE	9	40N	10W	MD	Mining and domestic	L-372
3431	5/21/23	Earl K., Effie A., Keith M., and Leola M. Lee	16N/7E-1H	Cade Creek	SE	NE	1	16N	7E	H	Domestic and irrigation, 11 acres	L-853
3697	10/28/23	S. D. Haworth	47N/7W-12H1 47N/7W-12H2	Moors Gulch	NE	SE	12	47N	7W	MD	Irrigation, 40 acres	L-804
3724	11/21/23	N. T. Brown and M. A. Hill	--	Little South Fork of Indian Creek	SE	SE	27	17N	6E	H	Irrigation, 14 acres	L-619
3945	4/8/24	Christian Bollhorn	--	Tributary to South Tenney Creek	NE	SW	32	12N	6E	H	Domestic and irrigation, 8 acres	L-1327
4053	6/26/24	Patricia Judge and Alex Markow	40N/11W-3F1	Eddy Gulch	NE	SW	33	40N	11W	MD	Mining	L-962
4213	9/15/24	Jess R. Deavilla	47N/9W-24H	Beaver Creek	SW	NW	19	47N	8W	MD	Irrigation, 30 acres	L-1352
4623	6/11/25	George T. Woodson	--	Spring tributary to Klamath River Tributary to Klamath River	SE	SE	8	11N	6E	H	Domestic and irrigation, 6 acres	L-1162
4755	8/28/25	John A. Gross	--	Bear Creek	NE	SW	33	15N	8E	H	Irrigation, 7 acres	L-952
5040	6/1/26	Laurence M. Knudsen, Sr.	--	Spring tributary to Klamath River	NE	SW	22	12N	6E	H	Irrigation, 1 acre	L-795
5079	6/30/26	S. H. Nordstrom	--	Leaky Gulch	SE	NW	25	10N	5E	H	Mining and domestic	L-1717
5257	11/5/26	Leo L. and Ross L. Brown	10N/7E-1F1	Hammel Creek tributary to Northlimer Creek	NE	SW	4	10N	7E	H	Domestic and irrigation, 25 acres	L-892

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TABLE C-1 (Continued)
APPLICATIONS TO APPROPRIATE WATER IN
KLAMATH RIVER HYDROGRAPHIC UNIT
(Filed with State Water Rights Board as of June 30, 1960)

Application Number	Date Filed	Present Owner	DWR Diversion Number	Source	Location of Point of Diversion					Amount	Period of Diversion	Purpose	Status*
					1/4	1/4	Sec.	Tp.	R.	B. & M.			
5340	2/2/27	Estate of Collette A. Otterson	--	Deason Creek	SE	NW	2	11N	6E	H	May 15-Oct 1 Jan 1-Dec 31	Irrigation, 7 acres Domestic	L-824
5505	6/2/27	Harold B. and Eloise A. Liske, Richard E. and Bonnie L. Mann	--	Fong High Creek	NW	NE	14	10N	7E	H	Jan 1-Dec 31	Domestic	L-1026
5816	2/21/29	Patricia Judge	46N/11W-33P1	Eddy Gulch	NW	SE	33	40N	11W	MD	Nov 1-May 15	Mining	L-1188
5877	4/10/28	C. H. Barton and Margaret R. Patterson	--	Springs tributary to Klamath River	NW	NE	22	46N	10W	MD	Apr 1-Oct 1	Domestic and Irrigation, 2 acres	L-2215
5878	4/10/28	C. H. Barton	--	Springs tributary to Klamath River	NE	NE	22	46N	10W	MD	Apr 1-Oct 1	Domestic and Irrigation, 2 acres	L-2216
6140	12/15/28	Charles D. and Ruth M. Pratt	--	East Fork Scott River	NE	SW	13	40N	8W	MD	Jun 1-Aug 1	Irrigation, 65 acres	L-325
6166	1/19/29	United States Six Rivers National Forest	--	Spring tributary to Bluff Creek	SW	SW	19	10W	5E	H	Jan 1-Dec 31	Domestic	L-1509
6372	7/12/29	Mary L. Foxen	--	Tributary to Nordheimer Creek	SE	SW	9	10N	7E	H	Jan 1-Dec 31	Domestic and Irrigation, 3 acres	L-1432
6427	9/3/29	R. W. and Erna Watson	--	Oak Flat Creek	SW	SW	32	16N	7E	H	Dec 1-Jul 1	Domestic and power	L-2330
6456	10/9/29	R. L. Chaffey	11W/1E-28N1	Branch Creek	SW	SW	28	11N	1E	H	Aug 1-Sept 31	Domestic and Irrigation, 11 acres	L-2318
6766	8/14/30	E. F. and Beatrice Baker	--	Tributary to Red Gap Creek	NW	SE	15	10N	5E	H	Apr 15-Oct 1	Domestic and Irrigation, 6 acres	L-1499
7123	11/12/31	Ernest C. and Dorothy Flackus	--	Tanner Gulch	SE	SE	11	17N	6E	R	Jan 1-Dec 31	Mining	L-1608
7211	3/17/32	Fred S. Bair	--	Bair Creek tributary to Klamath River	SE	SE	36	10N	4E	H	Jan 1-Dec 31	Domestic	L-2224
7282	6/6/32	Walter and Heille Shumlin	47N/5W-31P1	Beaver Creek	SE	NW	31	47N	8W	MD	Jan 1-Dec 31	Power	L-1656
7342	8/9/32	Marion M. Kniffen	17N/8E-10N1	Cole Creek tributary to South Fork Indian Creek	SE	SE	10	17N	6E	H	Jan 1-Dec 31	Mining	L-1882
7376	9/12/32	H. C. and E. M. Hamon, S. C. Cayun, T. P. Shults, and J. J. Kennedy	--	Walker Creek	SW	NW	18	46N	11W	MD	Apr 1-Oct 1	Domestic and Irrigation, 2.9 acres	L-1956
7377	9/12/32	H. C. Hamon	46N/11W-18E1	Walker Creek	SW	NW	18	46N	11W	MD	Apr 1-Oct 1	Domestic and Irrigation, 20 acres	L-1957
7396	9/29/32	Douglas Eastlick	--	North Russian Creek	SW	NE	19	40N	10W	MD	Apr 15-Sept 15	Domestic and Irrigation, 3 acres	L-1500
7406	10/13/32	M. H. Bush	--	Tom Payne Creek	SE	SW	4	11N	7E	H	Jan 1-Dec 31	Mining	L-2649
7423	11/7/32	Flores Louise Cook	--	Twin Gulch	NW	SE	22	17N	7E	R	Jan 1-Dec 31	Domestic and mining	L-1960
7529	3/31/33	E. S. Dowling and Margaret Dowling Johnson	--	Devile Hole Creek	SE	NE	26	44N	11W	MD	Jan 1-Dec 31 Apr 1-Nov 1	Domestic Irrigation, 5 acres	L-1785
7573	6/3/33	Robert and Terry L. Hawley	--	Spring tributary to Klamath River	NW	NE	35	46N	11W	MD	Jan 1-Dec 31	Domestic	L-1659
7678	9/20/33	State of California Division of Highways	--	Fat Creek	SW	NE	27	46N	11W	MD	Jan 1-Dec 31	Recreational	L-1761
7679	9/20/33	State of California Division of Highways	--	Sweetwater Spring	NE	SE	6	16N	8E	MD	Jan 1-Dec 31	Recreational	L-1762

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TABLE C-1 (Continued)
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KLAMATH RIVER HYDROGRAPHIC UNIT
(Filed with State Water Rights Board as of June 30, 1960)

Application Number	Date Filed	Present Owner	DWR Diversion Number	Source	Location of Point of Diversion					Amount	Period of Diversion	Purpose	Status*
					1/4	1/4	Sec.	Tp.	R.	B. B. M.			
7680	9/20/33	State of California Division of Highways	--	Niagara Falls Stream tributary to Klamath River	SE	NW	29	14N	6E	ND	Jan 1-Dec 31	Recreational	L-1835
7681	9/20/33	State of California Division of Highways	--	Browns Creek	NE	SE	30	15N	7E	H	Jan 1-Dec 31	Recreational	L-1836
7682	9/20/33	State of California Division of Highways	--	Yumaqua Spring	SE	SW	17	13N	6E	H	Jan 1-Dec 31	Recreational	L-1763
7683	9/20/33	State of California Division of Highways	--	Little Falls Creek	NE	NE	9	10N	5E	H	Jan 1-Dec 31	Recreational	L-1764
7684	9/20/33	State of California Division of Highways	--	Five Mile Creek	SE	SW	16	11N	6E	H	Jan 1-Dec 31	Recreational	L-1765
7685	9/22/33	Curtis L. Melvin M., and L. F. Bell	--	Little South Fork Indian Creek	SW	SE	15	17N	6E	H	Jan 1-Dec 31	Mining, power, and domestic	L-1746
7789	12/26/33	David M. Huey	17N/7E-431	East Fork Indian Creek	SW	NE	4	17N	7E	H	Jan 1-Dec 31	Power	L-2000
7903	1/6/34	William C. and Margaret Van Fleet	--	Dark Gulch	NW	NW	10	10N	5E	H	May 1-Oct 31	Domestic, fire protection, and irrigation, 10 acres	L-2229
7884	3/28/34	United States Klamath National Forest	--	Kelsey Creek	SE	SE	20	44N	11W	ND	Mar 1-Dec 1	Domestic	L-2148
7911	4/19/34	Robert S. and Pearl Z. Crooks	--	Tennessee Gulch	NW	NW	14	17N	6E	H	Jan 1-Dec 31	Mining and domestic	L-1989
7991	6/26/34	Samuel E. and Avis L. Coleman	--	Macks Creek	Lot	1	1	45N	11W	ND	Jan 1-Dec 31	Domestic	L-1809
7993	6/27/34	C. F. Starr and L. M. Hugbee	--	East Fork Whites Gulch	SW	NE	1	39N	11W	ND	Jan 1-Dec 31	Mining and domestic	L-2658
8053	8/6/34	Basil L. and Zeila L. Price	--	Boulder Creek	SW	SE	27	44N	11W	ND	Jan 1-Dec 31	Recreational and domestic	L-3258
8139	10/22/34	Happy Camp Improvement, Inc.	16N/7E-14M	Elk Creek	NW	NW	25	16N	7E	H	Jan 1-Dec 31	Municipal	L-2988
8148	10/30/34	Rose and Leo Brown	10N/7E-4P1	Hammel Creek	NE	SW	4	10N	7E	H	Nov 1-June 30	Mining	L-2108
8219	1/21/35	Basil L. and Zeila L. Price	44N/11W-27K1	Boulder Creek	SW	SE	27	44N	11W	ND	Jan 1-Dec 31	Power	L-3259
8355	6/10/35	Mrs. Charles H. Roif	--	Thompson Gulch	NW	SE	15	37N	10W	ND	Apr 1-Oct 1	Domestic and irrigation, 8 acres	L-2373
8364	6/20/35	Lester B. Jacobson	45N/8W-10R1	Middle Fork Humbug Creek	SE	SE	10	45N	8W	ND	Feb 1-Aug 1	Mining	L-2468
8475	10/18/35	United States Klamath National Forest	--	Spring tributary to Klamath River	NE	SW	8	13N	6E	H	Jan 1-Dec 31	Domestic	L-2149
8613	3/18/36	Milo C. and Loreta Walker	--	Baker Gulch	NW	SW	15	17N	7E	H	Sept 1-Jul 1	Domestic	L-2117
8645	4/24/36	Northern California, Nevada District Assemblies of God	--	Spring tributary to Klamath River	NW	SE	33	12N	6E	H	Jan 1-Dec 31	Domestic	L-2380
8712	6/20/36	Charles O. and Ruth Pratt	--	Kelsey Creek	SE	SW	21	44N	11W	ND	Jan 1-Dec 31	Power	L-2510
8751	8/6/36	John Dalwick	--	Elk Creek	NE	SE	12	15N	7E	N	Apr 1-Oct 31	Domestic and irrigation, 12 acres	L-2536
8769	8/21/36	Mrs. Ellen Allen	--	Crawford Creek	NW	SE	36	11N	5E	H	Jan 1-Dec 31	Domestic	L-2559
8770	8/21/36	Hamburg Association, Inc.	--	Macks Creek	SE	SE	36	46N	11W	ND	Sept 1-May 15	Domestic	L-2447

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APPLICATIONS TO APPROPRIATE WATER IN

KLAMATH RIVER HYDROGRAPHIC UNIT

(Filed with State Water Rights Board as of June 30, 1960)

Application Number	Date Filed	Present Owner	DWR Diversion Number	Source	Location of Point of Diversion					Amount	Period of Diversion	Purpose	Status
					1/4	1/4	Sec.	Tp.	R.	B. & M.			
8811	10/27/36	United States Klamath National Forest	--	West Branch Indian Creek	NW	SE	23	18N	6S	H	May 1-Dec 15	Domestic and recreational	L-2321
8959	5/3/37	F. H. Crooke	--	Douglas Creek Spring tributary to Klamath River Spring tributary to Klamath River	SE SW SE	SW SW SW	18 18 18	18N 18N 18N	7E 7E 7E	H H H	Dec 1-Apr 1	Mining and domestic	L-2508
9002	6/16/37	United States Klamath National Forest	--	Jessups Gulch South Fork of Jessups Gulch	NE NE	NW NW	32 32	40N 40N	11W 11W	MD MD	Jan 1-Dec 31	Domestic and fire protection	L-2151
9003	6/16/37	United States Klamath National Forest	--	Kalsey Creek	SE	SE	20	44N	11W	MD	May 1-Oct 31	Domestic and irrigation, 1.54 acres	L-2919
9010	6/18/37	Estate of George A. Milne	--	Masic Creek	NW	SE	16	40N	10W	MD	Jan 1-Dec 31	Mining and domestic	L-2524
9054	7/28/37	A. Y. Cripps	11N/7E-35F1	Crapo Creek	NE	NE	2	18N	7E	H	Dec 1-Jul 1	Mining and domestic	L-4182
9078	8/17/37	E. W. Sawyer	37N/10W-5D1	Rush Creek	SE	SW	31	38N	10W	MD	Jan 1-Dec 31 May 1-Sept 30	Domestic Irrigation, 8 acres	L-2530
9096	8/24/37	Helen Deason Wright	16N/8E-16H1	Spring tributary to Klamath River	SE	NE	16	16N	7E	H	Jan 1-Dec 31 May 1-Sept 30	Domestic Irrigation, 10 acres	L-2229
9102	8/30/37	Helen Deason Wright	16N/7E-15F1	Spring tributary to Klamath River	SE	NW	15	16N	7E	H	Jan 1-Dec 31 May 1-Sept 30	Domestic Irrigation, 60 acres	L-2530
9107	9/8/37	United States Klamath National Forest	--	Louie Creek	SE	SW	21	46N	11W	MD	Apr 1-Dec 1	Recreational	L-2150
9113	9/11/37	A. Y. Cripps	--	Crapo Creek	NE	NE	2	10N	7E	H	Jan 1-Dec 31	Domestic	L-2269
9305	6/1/38	Estate of Edward A. Robertson	--	Rays Gulch	SE	SE	10	37N	11W	MD	Dec 1-Jul 1	Mining	L-2507
9318	6/11/38	United States Klamath National Forest	--	Spring tributary to Klamath River	SW	SW	22	46N	11W	MD	Apr 1-Nov 30	Recreational	L-2322
9346	7/11/38	Sawyers Bar School District	--	Tanners Gulch	SE	NE	29	40N	11W	MD	Sept 1-May 31	Domestic	L-2455
9529	3/24/39	Harry W. Jordan	--	Springs tributary to McCaffey Creek	NW	NW	32	45N	10W	MD	Apr 1-Nov 1	Domestic and irrigation, 5 acres	L-2473
9538	3/31/39	United States Klamath National Forest	--	Fort Goff Creek	SW	SW	32	47N	12W	MD	May 1-Dec 1	Recreational	L-2545
9654	7/5/39	E. G. Shaffer and D. H. Murphy	--	Kings Creek	NE	SW	12	14N	6E	H	Dec 1-Apr 30	Mining	L-3199
9656	7/10/39	United States Klamath National Forest	--	Spring tributary to Scott River	SW	SW	22	44N	11W	MD	Apr 1-Dec 1	Recreational	L-2956
9659	7/11/39	William D. Sager, et al.	40N/12W-28F1	Olson Creek	SE	SE	28	40N	12W	MD	Nov 30-Jul 15	Mining and domestic	L-3687
9710	8/24/39	Lloyd D. and Nattie E. Moss	--	Wildwood Springs	SW	NW	11	46N	12W	MD	Jan 1-Dec 31	Domestic	L-3017
9762	11/4/39	Duane H. and Emma Lou Curry	18N/6E-25H1	Indian Creek	SE	NW	25	18N	6E	N	Dec 1-Jul 1 Jul 1-Dec 1	Mining Domestic	L-3027
9784	12/8/39	E. A. and H. V. Stans	--	Tributary to Klamath River	SW	NE	19	10N	4E	H	Jan 1-Dec 31 May 1-Oct 31	Domestic and stockwatering Irrigation, 50 acres	L-5489
9912	5/24/40	D. G. Steele	--	Spring tributary to Middle Creek	SW	SE	9	44N	11W	MD	Jan 1-Dec 31	Domestic	L-2696
10064	11/24/40	Theodorica Caldwell	--	Whitmore Creek	NW	SW	21	11N	6E	N	Dec 1-Jul 1	Mining	L-3709

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Application Number	Date Filed	Present Owner	DWR Diversion Number	Source	Location of Point of Diversion					Amount	Period of Diversion	Purpose	Status*
					1/4	1/4	Sec.	Tp.	R.	B. & M.			
10140	3/10/41	Edna M. Miller	--	Left Fork of Crawford Creek	SW	NW	35	11N	5E	R	Nov 1-Jul 1	Domestic Irrigation, 5 acres	L-5096
10145	3/13/41	Simpson Redwood Company	--	Tributary to High Prairie Creek	NE	NE	28	11N	1E	H	May 1-Jul 1	Domestic	L-2714
10146	3/13/41	Simpson Redwood Company	--	Tributary to High Prairie Creek	NE	NE	28	11N	1E	H	Jan 1-Dec 31	Domestic	L-2716
10165	3/24/41	Maudie F. Settle	--	Bill Berry Creek	NE	NW	20	45N	10W	MD	Jan 1-Dec 31	Power and domestic	L-2757
10185	4/18/41	Estate of Frederick Edward Settle	--	Swamp Creek	SW	SE	17	45N	10W	MD	Jan 1-Dec 31	Domestic and power	L-2758
10187	4/23/41	United States Six Rivers National Forest	--	High Prairie Creek	SE	NW	21	11N	1E	R	Jan 1-Dec 31	Domestic Irrigation, 1 acre	L-4546
10197	5/2/41	Mary K. Mallin	--	Bully Creek	NE	NW	19	10N	4E	H	May 1-Oct 1	Domestic	L-3278
10312	10/30/41	Harry M. Jordan	--	Springs tributary to McCaffrey Creek	NW	NW	32	45N	10W	MD	Jan 1-Dec 31	Power	L-2849
10343	12/11/41	Charles Hockaday and Paul Back	17N/7E-4P1	East Fork Indian Creek	SE	SW	4	17N	7E	H	Jan 1-Dec 31	Domestic Irrigation, 8 acres	L-4883
10427	4/10/42	Happy Camp Improvement, Inc.	16N/7E-14N1	Elk Creek	NW	NW	25	16N	7E	H	May 1-Oct 1	Municipal	L-3279
10435	4/25/42	United States Klamath National Forest	--	Spring tributary to Klamath River	SE	SE	7	15N	7E	H	Jan 1-Nov 30	Recreational	L-3182
10516	7/21/42	Charles B. and Ethel F. Shannon	--	Ranch Gulch	SW	NE	2	16N	7E	H	May 1-Dec 31	Domestic	L-3061
10605	2/26/43	State of California Division of Highways	--	Browns Creek	NE	SE	30	15N	7E	H	Jan 1-Dec 31	Recreational	L-3118
10630	4/19/43	Walter W. Jr. and Barbara B. Robinson	47N/11W-32N1	Selad Creek	NE	SE	32	47N	11W	MD	Apr 1-Jul 1	Irrigation 13.8 acres	L-3038
10715	10/4/43	William H. Hubbard	--	Jessop Creek	SW	SE	29	40N	11W	MD	Jan 1-Dec 31	Domestic	L-4337
10794	3/29/44	State of California Division of Highways	--	Douglas Creek	NE	NW	19	15N	7E	H	Dec 1-Nov 1	Mining, power, domestic, and irrigation, 2 acres	L-3321
11032	4/23/45	E. M. Sawyer	37N/11W-13W1	BLind Horse Creek	NE	SW	13	37N	11W	MD	Jan 1-Dec 31	Domestic	L-4090
11099	7/9/45	Joe D. Hood	--	Skansan Gulch tributary to Scott River	SW	SE	20	45N	10W	MD	May 1-Oct 1	Power and irrigation, 6 acres	L-3490
11123	7/30/45	United States Klamath National Forest	40N/11W-52E1	Jessups Gulch	NE	NW	32	40N	11W	MD	Jan 1-Dec 31	Stockwatering	L-3244
11272	2/4/46	Simeon L. Zane	--	Spring tributary to Klamath River	NE	SE	36	10N	4E	H	May 1-Nov 1	Power and domestic	L-3756
11368	4/9/46	Robert A. Wharton	--	Logans Gulch	SE	SE	11	10N	7E	H	Jan 1-Dec 31	Domestic	L-4552
11476	7/22/46	Richard T. Bendl	40N/12W-32E1	Big Creek	SE	SE	31	40N	12W	MD	Dec 1-May 1	Mining	L-4094
11521	8/19/46	Northwestern Mining Company	--	Alder Creek	SW	SE	28	40N	12W	MD	Jan 1-Dec 31	Domestic	L-4187
11572	10/1/46	Earle A. and Irva R. Jackson	--	Spring tributary to Indian Creek	SE	SE	9	17N	7E	H	Dec 1-May 1	Mining	L-3591

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TABLE C-1 (Continued)

APPLICATIONS TO APPROPRIATE WATER IN

KLAMATH RIVER HYDROGRAPHIC UNIT

(Filed with State Water Rights Board as of June 30, 1960)

Application Number	Date Filed	Present Owner	DWR Diversion Number	Source	Location of Point of Diversion					Amount	Period of Diversion	Purpose	Status
					1/4	1/4	Sec.	Tp.	R.	B. & M.			
11623	11/15/46	Youngs Saw Mill	--	Taylor Spring No. 1 Taylor Spring No. 2	SW SE	SW	17	10N	5E	H	Jan 1-Dec 31	Domestic	L-4207
11625	11/18/46	C. T. and E. A. Howard and C. and J. Garms	--	Whiskey Gulch	SE	NE	27	17N	7E	H	Jan 1-Dec 31	Domestic and irrigation, 5 acres	P-6763
11654	12/10/46	Jack and Vero L. Boaz	38N/11W-30N1	Timber Gulch	SE	SW	30	38N	11W	MD	Dec 1-Jul 15	Mining	L-3472
11669	12/23/46	Lovina A. Allison	--	Spring tributary to Klamath River	L o t 3	31	10N	5E	H	H	Jan 1-Dec 31	Domestic	L-3510
11677	1/2/47	Louis Alphonses	47N/6W-681	Hutton Creek	SW	NE	6	47N	6W	MD	Jan 1-Dec 31	Domestic end stockwatering	L-3414
11692	1/10/47	United States Six Rivers National Forest	11W/6E-21E1	Whitmore Creek	SW	NW	21	11W	6E	H	Jan 1-Dec 31	Power and domestic	L-3418
11704	2/3/47	M. M. Campbell	--	Spring tributary to Klamath River	SE	NW	29	11N	6E	H	Jan 1-Dec 31	Domestic	L-3703
11729	2/14/47	United States Klamath National Forest	--	Spring tributary to Klamath River	SW	SW	2	46N	9W	MD	Jan 1-Dec 31	Domestic	L-3391
11749	2/26/47	D. H. and E. L. Curry	18N/6E-2511	Indian Creek	SE	NW	25	18N	6E	H	Apr 1-Oct 1	Irrigation, 2.5 acres	L-3720
11770	3/11/47	Thomas L. and Velma M. Lots	--	Trail Gulch	SE	SW	22	47N	8W	MD	Jan 1-Dec 31	Mining and domestic	L-3350
11832	4/21/47	T. M. Clayburn	46N/7W-241	Ash Creek	SW	NW	1	46N	7W	MD	Oct 1-Jun 30	Mining	L-5217
11948	6/23/47	Carl, Jean, and June Maldwin	--	Spring tributary to Klamath River	SE	SE	30	11N	6E	H	Jan 1-Dec 31	Domestic	L-4218
11979	7/11/47	P. F. and M. C. Starritt	--	Starritt Spring	NE	SE	31	11N	6E	H	Jan 1-Dec 31	Domestic	L-3397
12011	7/29/47	MacIsaac and Menke Company	--	Benjamin Creek	NE	NE	21	16N	7E	H	Jan 1-Dec 31	Domestic	L-5031
12015	7/31/47	Margarette Hallor	--	Johnson Creek	SE	NW	32	15N	8E	H	Apr 1-Oct 31	Irrigation, 1 acre	L-3364
12065	9/2/47	United States Klamath National Forest	44N/11W-20R1	Kelsey Creek	SE	SE	11	44N	11W	MD	May 1-Nov 1	Mining and domestic	L-3659
12158	11/19/47	William and Lucille Ellison	--	Spring tributary to Indian Creek	SE	SE	3	16N	7E	H	Jan 1-Dec 31	Domestic	L-3716
12228	1/6/48	L. W. and Byrall Hesford	--	Tributary to Klamath River Tributary to Klamath River	SE NW	NW SE	9 9	13W 13N	1E 1E	H H	Jan 1-Dec 31	Domestic and stockwatering	L-3442
12346	3/1/48	George M. and Margaret S. Chandler	--	Spring tributary to Ash Creek	NE	NE	2	46N	7W	MD	May 15-Oct 1	Domestic and irrigation, 3 acres	L-3471
12549	5/16/49	John Spinks	--	Spring tributary to Klamath River	SE	SE	9	12N	6E	H	Jan 1-Dec 31	Domestic	L-3606
12582	7/2/49	Harvey K. Wett	--	Tributary to North Hungry Creek	SW	SW	23	48N	8W	MD	Apr 1-Oct 31	Domestic	L-4108
12643	8/12/48	The California Oregon Power Co.	--	Jenny Creek	NE	SE	26	48N	5W	MD	Mar 1-Nov 1	Irrigation, 401 acres	P-7482
12673	9/1/48	Kenneth J. Kennedy	--	Second Gulch	SW	SW	36	46N	11W	MD	Jan 1-Dec 31	Domestic and fire protection	L-4208
12694	9/13/48	Frederick L. and Lenora A. Klein, Robert J. and Elle Mae Schwartz, Roy Campbell, and Fern Hilton	--	Spring tributary to Klamath River	SE	SE	35	46N	11W	MD	Jan 1-Dec 31	Domestic	L-5537

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KLAMATH RIVER HYDROGRAPHIC UNIT
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					Location of Point of Diversion									
					1/4	1/4	Sec.	Tp.	R.	S. & M.				
12713	9/27/48	Emly, Bruce, and Leland Donahue	--	Tributary to Klamath River	SE	SW	3	11N	6E	H	0.2 cfs Jan 1-Dec 31 May 1-Oct 31	Domestic Irrigation, 2 acres	L-3739	
12729	10/1/48	William Rosamine, Jr.	--	Sandy Bar Creek	SW	NW	28	13N	6E	H	0.32 cfs Jan 1-Dec 31	Power and domestic	L-3760	
12745	10/13/48	Louis Ford	40N/64-601	Printers Gulch	NW	NW	6	46N	6W	MD	0.75 cfs Feb 1-Jun 30	Mining	L-4556	
12903	1/19/49	Joe Freshour	--	Spring tributary to Klamath River	NW	NE	11	46N	8W	MD	7,200 gpd Jan 1-Dec 31 Apr 15-Oct 15	Stockwatering Irrigation, 1 acre	L-3629	
12924	2/3/49	Louis E. and Eloise H. Halce	--	Ullathorne Creek	NW	NE	2	10N	5E	H	1,300 gpd Jan 1-Dec 31	Domestic	L-3961	
12932	2/15/49	Happy Camp Improvement, Inc.	16N/7E-14M1	Elk Creek	NW	NW	25	16N	7E	H	1.0 cfs Jan 1-Dec 31	Municipal	P-7700	
13005	3/28/49	Frank E. Walker	--	Whittle's Creek Spring tributary to Whittle's Creek	SE SE	SW SW	6 6	10N 10N	6E 6E	H H	14,000 gpd Jan 1-Dec 31 Feb 15-Oct 1	Domestic Irrigation, 1.5 acres	L-3635	
13023	4/8/49	Louis R. Larson	--	Tributary to Red Cap Creek	SE	SE	15	10N	5E	H	0.32 cfs Nov 1-May 1	Mining	L-4119	
13024	4/8/49	Louis R. Larson	--	Spring tributary to Red Cap Creek Spring tributary to Red Cap Creek	SE NW	NE SW	15 14	10N 10N	5E 5E	H H	2,000 gpd 5,000 gpd Jan 1-Dec 31	Domestic	L-4150	
13066	4/29/49	Klamath Cedar Company	--	Spruce Creek	SW	SE	3	13N	1E	H	0.061 cfs Jan 1-Dec 31	Industrial and domestic	L-3823	
13122	5/31/49	James Malone	--	Tributary to Elk Creek	NE	SE	35	16N	7E	H	0.025 cfs May 1-Oct 1	Irrigation, 2 acres	L-4718	
13308	8/22/49	Don and John McMillan	--	Spruce Creek	SW	SE	3	13N	1E	H	2,700 gpd Jan 1-Dec 31	Domestic	L-4017	
13422	11/1/49	Alton F. and Blanch O. Kay	--	Ullathorne Creek	NW	NE	2	10N	5E	H	1,300 gpd Jan 1-Dec 31	Domestic	L-3958	
13433	11/1/49	Lillian O. Williams	--	Ullathorne Creek	NW	NE	2	10N	5E	N	1,300 gpd Jan 1-Dec 31	Domestic	L-3959	
13434	11/2/49	Irene A. Thompson	--	Ullathorne Creek	NW	NE	2	10N	5E	H	0.002 cfs Jan 1-Dec 31	Domestic	P-7984	
13435	11/1/49	Verne L. and Leta Johnson	--	Ullathorne Creek	NW	NE	2	10N	5E	H	400 gpd May 1-Nov 1	Domestic	L-5301	
13437	11/1/49	Robert V. Bryan	--	Ullathorne Creek	NW	NE	2	10N	5E	H	1,300 gpd Jan 1-Dec 31	Domestic	L-3960	
13446	11/4/49	United States Klamath National Forest	--	Eagle Spring	SW	NW	27	44N	11W	MD	3,250 gpd Jan 1-Dec 31	Domestic and fire protection	L-3825	
13476	11/21/49	Thorne O. Vest	--	West Spring	NW	SE	11	16N	7E	H	2,000 gpd Mar 1-Oct 1	Domestic	L-4245	
13575	2/9/50	W. C. Hamrick	--	South Fork Ferrills Gulch	NW	NW	29	39N	12W	MD	0.030 cfs Jan 1-Dec 31	Domestic and irrigation, 2 acres	P-8120	
13685	4/12/50	Earl and H. T. Derry	--	Spring tributary to Salmon River	NW	NW	3	11N	6E	H	1,300 gpd Jan 1-Dec 31	Domestic	L-4613	
13720	5/4/50	Arthur Henry and Rosamond E. French	--	Curley Jack Creek	NE	SW	10	16N	7E	H	1,950 gpd Apr 15-Oct 15	Domestic and irrigation, 2 acres	L-4595	
13842	7/7/50	United States Hamilton Air Force Base	14N/1E-33R1	High Prairie Creek	SE	SE	23	14N	1E	H	11,500 gpd Jan 1-Dec 31	Municipal	L-5109	
13942	9/8/50	United States Six Rivers National Forest	11W/16E-32R1	Porch Creek Spring tributary to Klamath River	NW NE	NE NW	32 32	11N 11N	6E 7E	H H	0.019 cfs 0.006 cfs Jan 1-Dec 31	Domestic and fire protection	L-4903	

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KLAMATH RIVER HYDROGRAPHIC UNIT

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					1/4	1/4	Sec	Tp.	R.	B. & M.				
14123	1/20/51	Henry D. Fowler	--	Tributary to Indian Creek	SE	SW	23	17N	7E	H	13,000 gpd	Jan 1-Dec 31 May 1-Nov 1	Domestic Irrigation, 1.5 acres	L-4141
14202	3/15/51	J. J. Burger	--	Tributary to Indian Creek	SW	NW	15	17N	7E	H	5,000 gpd	Jan 1-Dec 31	Domestic	L-4089
14255	4/16/51	W. V. and Anita Huey	--	Indian Creek	SE	SE	27	17N	7E	H	8,000 gpd	Mar 1-Dec 1 Mar 1-Oct 1	Domestic Irrigation, 0.75 acre	L-4083
14456	8/30/51	Frank Kanig and Thomas Roberts	17N/7E-15N1	Spring tributary to Indian Creek	NE	NE	21	17N	7E	H	4,320 gpd	Jan 1-Dec 31	Domestic	L-4960
14457	8/30/51	Thomas Roberts and Frank Kanig	17N/7E-15N1	Spring tributary to Indian Creek	NE	NE	21	17N	7E	H	4,320 gpd	Jan 1-Dec 31	Domestic	L-4961
14779	4/25/52	Octave Donati	--	Spring tributary to Klamath River	NW	NE	18	46N	11W	MD	216 gpd	Jan 1-Dec 31	Domestic	L-4575
14801	5/9/52	United States Klamath National Forest	--	Tributary to North Fork Salmon River	NW	SE	28	40N	12W	MD	100 gpd	Apr 15-Nov 15	Domestic	L-4828
14941	7/30/52	Olyn W. Gould	38N/11W-29Q1	Ocell Creek	SW	SE	29	38N	11W	MD	0.3 cfs	Jan 1-Dec 31	Power and domestic	L-5102
15004	9/2/52	Stephen Comstock	--	Spring tributary to South Fork Salmon River	SW	NW	29	39N	12W	MD	400 gpd	May 1-Nov 30	Domestic	L-5131
15070	10/29/52	United States Klamath National Forest	--	Tributary to North Fork Salmon River	SW	SE	13	40N	11W	MD	150 gpd	May 1-Nov 15	Domestic	L-5303
15171	1/27/53	S. Andrew McBeth	--	Spring tributary to Klamath River	NW	SE	18	13N	2E	H	0.05 cfs	Jan 1-Dec 31	Domestic	L-5655
15229	3/9/53	S. Andrew McBeth	--	Spring tributary to Klamath River	NW	SE	18	13N	2E	H	1,500 gpd	Jan 1-Dec 31	Stockwatering	L-5656
15308	4/22/53	Mollie Quinn Richards Estate	--	Oak Creek	SW	SW	30	10N	4E	H	0.75 cfs	Mar 1-Nov 30	Irrigation, 40 acres	P-9547
15401	7/6/53	Rebel S. and T. H. Lockwood, Sr. and T. H. Lockwood, Jr.	--	Spring tributary to Klamath River	SE	SE	36	11N	5E	H	2,950 gpd	Jan 1-Dec 31 Apr 15-Aug 31	Domestic Irrigation, 1 acre	L-4685
15595	11/4/53	James M. and Grace Olive Fitchugh and A. L. Johnson	--	Cole Creek Goon Creek	NE SE	NW SE	4 2	17N 6E	6E H	H	3.0 cfs	Jan 1-Dec 31	Mining	P-9818
15637	12/7/53	Edwin G. and Hazel L. Kurze	--	Tributary to South Fork Salmon River	NE	SW	20	10N	8E	H	1,500 gpd	Jan 1-Dec 31	Domestic	L-5564
15800	3/26/54	Siskion Corporation	--	Copper Creek	SE	SW	29	14N	5E	H	12 cfs	Jan 1-Dec 31	Power	P-10426
15959	7/27/54	A. A. and Charlotte Price	--	Spring tributary to Indian Creek	NE	SE	3	16N	7E	H	650 gpd	Jan 1-Dec 31	Domestic	L-5343
15994	8/11/54	Harold R. and Edith D. Eddy	--	Spring tributary to Scott River	SW	NW	27	44N	11W	MD	550 gpd	Apr 1-Nov 1	Domestic	L-5595
16005	8/23/54	V and K Logging Company, Inc.	--	Spring tributary to Indian Creek	NW	SE	15	17N	7E	H	5,000 gpd	Jan 1-Dec 31	Domestic	L-5045
16120	11/1/54	E. E. McGlinns	17N/7E-7Q1	Tributary to South Fork Indian Creek	SE	NW	7	17N	7E	H	0.08 cfs	Jan 1-Dec 31	Domestic	L-5290
16232	2/10/55	Richard E. and Bonnie L. Mann Harold R. and Eloise A. Lipke	--	Tributary to South Fork Indian Creek	SW	NE	7	17N	7E	H	0.08 cfs	May 15-Oct 1	Irrigation 6 acres	L-5970
16296	4/1/55	Williamette Plywood Corporation	17N/7E-16Q1	Fong Wagh Creek	NW	NE	14	10N	7E	H	13,000 gpd	Mar 1-Nov 30	Irrigation, 1.5 acres	L-5375
16303	4/6/55	Mrs. Lena McGallan	--	Spring tributary to Indian Creek	NW	NE	21	17N	7E	H	0.1 cfs	Jan 1-Dec 31	Industrial and domestic	L-5375
				Boyd Gulch	NE	NW	11	10N	7E	H	10,000 gpd	Jan 1-Dec 31	Mining and domestic	P-10298

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					1/4	1/4	Sec	Tp	R	B. M.				
16509	4/11/55	Clara L. Smith	--	Spring tributary to Klamath River	SE	SW	2	14N	6E	H	1.0 cfs	Jan 1-Dec 31	Mining and domestic	P-10297
16584	5/19/55	Keith N. Lee	--	Spring tributary to Klamath River	NW	NW	7	16N	8E	N	0.025 cfs	Jan 1-Dec 31 Apr 1-Oct 31	Domestic Irrigation, 2 acres	L-5903
16644	7/1/55	Estate of Clarence A. George and Katherine C. George	--	Tributary to Salmon River	NW	SW	20	10N	8E	N	8,750 gpd	Jan 1-Dec 31 May 1-Nov 1	Domestic Irrigation, 1 acre	L-5642
16513	8/10/55	Adelle M. Brown	--	Reiney Gulch	NW	NW	33	42N	12W	MD	3.0 cfs	Jan 1-Dec 31	Mining and domestic	P-10513
16537	8/22/55	Everett G. Mardick	--	Spring tributary to Scott River	NW	SW	27	44N	11W	MD	750 gpd	Apr 1-Nov 1	Domestic	L-5574
16629	9/28/55	John P. and Florence C. Kennedy and Cleo W. and Irngard Still	--	Perkins Gulch	SE	NW	3	16N	7E	H	9,000 gpd	Jan 1-Dec 31	Domestic and irrigation, 3 acres	P-10649
16648	10/5/55	Clarence J. and Ruth B. Kuck	46N/5W-28R	Spring tributary to Willow Creek	SE	SE	28	46N	5W	MD	1.1 cfs	May 1-Nov 15	Stockwatering and irrigation, 86 acres	P-10524
16766	12/5/55	Joseph Miller	--	Tributary to South Fork Salmon River	SW	NW	19	10N	8E	N	0.04 cfs	Jan 1-Dec 31	Domestic and irrigation, 1.75 acres	P-10766
16888	2/9/56	Aubrey A. Hall	16N/7E-26R	Spring tributary to Indian Creek	NE	NW	26	17N	7E	H	2,000 gpd	Jan 1-Dec 31	Domestic and stockwatering	L-5504
16957	3/20/56	California Water Commission	--	Klamath River	-	-	9	47N	5W	MD	60,000 af	Jan 1-Dec 31	Power	Incomplete
16958	3/20/56	California Water Commission	--	Klamath River	-	-	9	47N	5W	MD	60,000 af	Jan 1-Dec 31	Irrigation, industrial, domestic, municipal, recreational, and fish and wildlife	Incomplete
16959	3/20/56	California Water Commission	--	Salmon River	-	-	28	11N	7E	H	1,000,000 af	Jan 1-Dec 31	Power and flood control	Incomplete
17009	4/16/56	John Menary	--	Tributary to Hypnot Creek	SW	SW	35	14N	1E	H	1.68 cfs	Jan 1-Dec 31	Domestic	P-10699
17031	4/24/56	California Water Commission	--	Klamath River	-	-	19	10N	5E	N	5,480,000 af	Jan 1-Dec 31	Irrigation, domestic, municipal, industrial, flood control, recreational salinity control, and fish and wildlife	Incomplete
17032	4/24/56	California Water Commission	--	Klamath River	-	-	19	10N	5E	H	5,480,000 af	Jan 1-Dec 31	Power	Incomplete
17033	4/24/56	California Water Commission	--	Klamath River	-	SW	33	16N	7E	H	4,120,000 af	Jan 1-Dec 31	Irrigation, domestic, municipal, industrial, flood control, recreational, salinity control, and fish and wildlife	Incomplete
17034	4/24/56	California Water Commission	--	Klamath River	-	SW	33	16N	7E	N	4,120,000 af	Jan 1-Dec 31	Power	Incomplete
17035	4/24/56	California Water Commission	--	Klamath River	-	-	31	46N	10W	MD	1,850,000 af	Jan 1-Dec 31	Irrigation, domestic, municipal, industrial, flood control, recreational, salinity control, and fish and wildlife	Incomplete
17036	4/24/56	California Water Commission	--	Klamath River	-	-	31	46N	10W	MD	1,850,000 af	Jan 1-Dec 31	Power	Incomplete
17037	4/24/56	California Water Commission	--	Klamath River	-	-	3	12N	2E	H	1,940,000 af	Jan 1-Dec 31	Irrigation, domestic, municipal, industrial, flood control, salinity control, and fish and wildlife	Incomplete

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					1/4	1/4	Sec.	Tr.	R.	B. & M.			
17038	4/24/56	California Water Commission	--	Klamath River	--	--	3	12N	2E	N	Jan 1-Dec 31	Power	Incomplete
17089	5/14/56	William J. Horn	--	Spring tributary to Hymot Creek	SE	NE	34	14N	1E	H	Jan 1-Dec 31	Domestic	L-5873
17105	5/23/56	Joseph Miller	--	Tributary to South Fork Salmon River	SW	NW	19	10N	8E	N	Jan 1-Dec 31	Mining	P-10767
17159	6/29/56	Vincent T. and Mary F. Hitzinger	--	Ferguson Creek	SE	NE	21	16N	7E	H	Jan 1-Dec 31	Domestic	L-5914
17286	9/22/56	Swerett W. and Elva N. Lisle	--	Spring tributary to Indian Creek	SW	SW	23	17N	7E	N	Jan 1-Dec 31	Domestic	L-6034
17342	10/30/56	Donald E. Fehlman	46N/5W-512	Tributary to Willow Creek	NW	SE	5	46N	5W	MD	May 1-Nov 1	Stockwatering and irrigation, 40 acres	P-10959
17343	10/30/56	Donald E. Fehlman	46N/5W-741	Tributary to Willow Creek	NE	SE	5	46N	5W	MD	May 1-Nov 1	Stockwatering and irrigation, 35 acres	P-10960
17412	12/31/56	Robert Mische and Patricia Mische	--	Willow Creek	NE	NE	7	46N	5W	MD	May 1-Dec 31	Domestic	P-11137
17454	2/5/57	Nathan A. and Ethel Z. Steele	--	Spring tributary to Merrill Creek	SE	SE	34	12N	6E	N	Jan 1-Dec 31	Domestic	P-11095
17527	3/26/57	California Oregon Power Company	--	Spring in Spike Gulch tributary to South Fork Salmon River	SE	SE	7	37N	9W	MD	Jan 1-Dec 31	Domestic, recreational, stockwatering and irrigation, 1 acre	P-11095
17530	3/27/57	W. R. Gilbert and Louis O. Hansen	--	Klamath River	SW	SW	9	47N	5W	MD	Jan 1-Dec 31	Power	P-12259
17578	4/26/57	V. J. W. Alexander, Edward Whalen, William Viner, and William Rigby	--	Little Bogus Creek	NW	SE	27	47N	5W	MD	Oct 1-Apr 1	Irrigation, 200 acres	P-11388
17765	8/6/57	Russell Frederick and Jean Frederick	46N/5W-1401	Walker Creek	SW	NW	18	46N	11W	MD	Jan 1-Dec 31	Domestic and irrigation, 44.6 acres	P-11089
17820	9/11/57	Estate of Midge Blunt Maring	--	Tributary to Willow Creek	NE	SE	14	46N	5W	MD	May 1-Aug 1	Irrigation, 60.8 acres	P-11592
17909	12/9/57	United States Klamath National Forest	--	Tributary to Willow Creek	SE	SE	14	46N	5W	MD	Jan 1-Dec 31	Domestic and irrigation, 20 acres	P-11258
18099	4/21/58	Charles F. Woodburn	--	Trepper Creek	SE	NW	34	48N	9W	MD	Jan 1-Dec 31	Domestic	P-11544
18114	4/30/58	Arkla and Wilma Harper	--	Tributary to Klamath River	SE	NW	31	46N	10W	MD	Mar 1-Dec 1	Domestic	P-11609
18140	5/19/58	United States Six Rivers National Forest	--	Swann Gulch	SW	NW	18	10N	8E	N	Jan 1-Dec 31	Domestic	P-11599
18141	5/19/58	United States Six Rivers National Forest	--	Spring tributary to High Prairie Creek	SE	SE	32	14N	1E	N	Jan 1-Dec 31	Domestic	P-11638
18142	5/29/58	United States Six Rivers National Forest	--	Spring tributary to McFarland Gulch	SW	SW	30	10N	5E	N	Jan 1-Dec 31	Domestic and recreational	P-11639
18173	6/6/58	Ezwin R. Harding	--	Fish Lake	NE	NE	14	10N	4E	N	Jan 1-Dec 31	Recreational	P-11639
18247	8/4/58	T. R. Stokesberry	--	Spring tributary to Fish Lake	SE	SW	11	10N	4E	N	Apr 1-Nov 30	Domestic	P-11640
18367	10/9/58	United States Klamath National Forest	--	Hacks Creek	NW	NW	1	45N	11W	MD	Jan 1-Dec 31	Domestic	P-11649
				Spring tributary to Pollock Gulch and Salmon River	SW	SE	7	10N	8E	N	Jan 1-Dec 31	Domestic and irrigation, 2.5 acres	P-11873
				Tributary to Beaver Creek	NW	SE	21	48N	8W	MD	May 1-Dec 1	Domestic and fire protection	P-11799

* P - Indicates permit number of application approved.

L - Indicates license number of right confirmed.

Incomplete - Indicates application not yet complete.

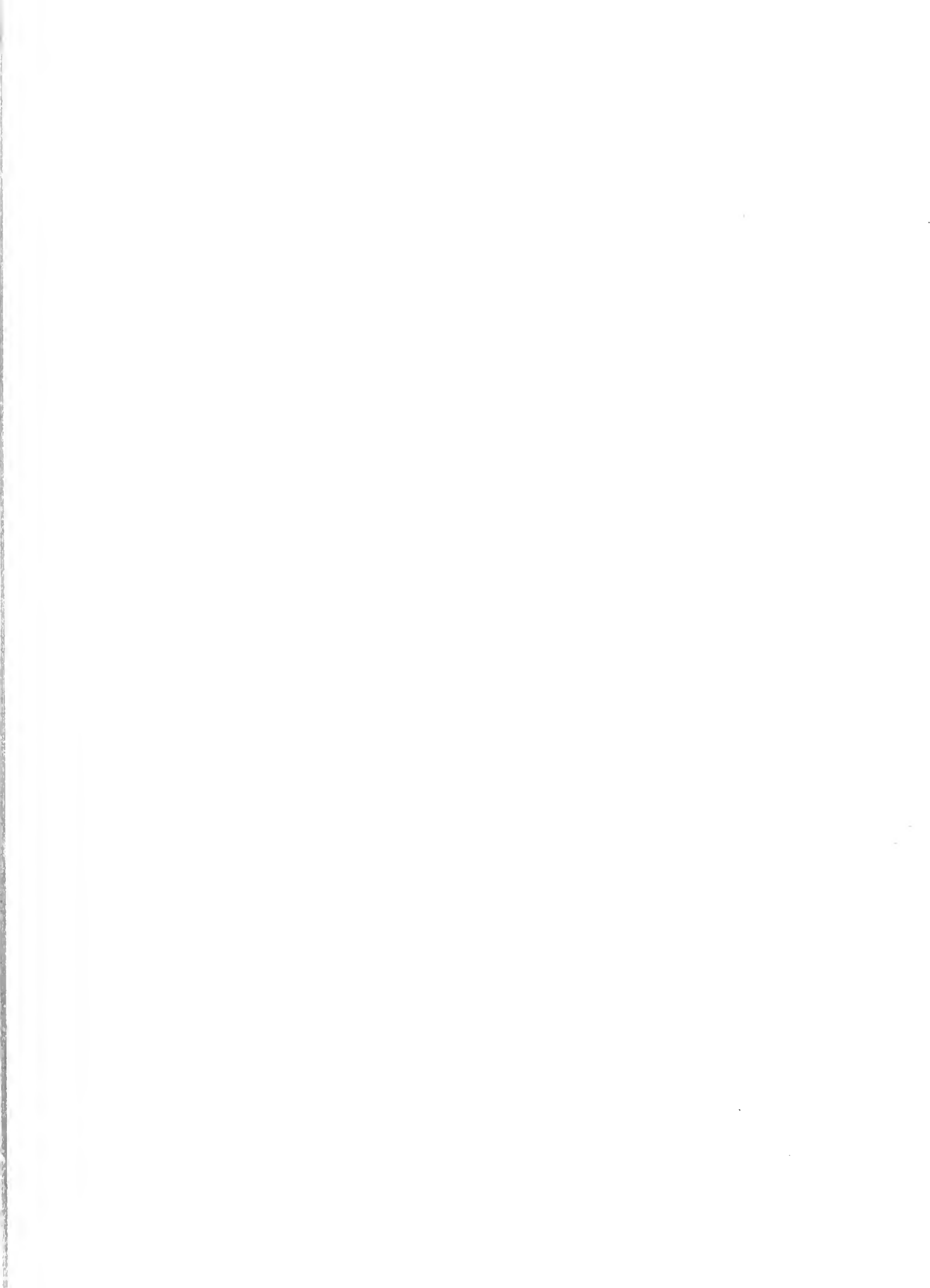
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TABLE C-1 (Continued)
APPLICATIONS TO APPROPRIATE WATER IN
KLAMATH RIVER HYDROGRAPHIC UNIT
(Filed with State Water Rights Board as of June 30, 1960)

Application Number	Date Filed	Present Owner	DWR Diversion Number	Source	Location of Point of Diversion						Amount	Period of Diversion	Purpose	Status
					1/4	1/4	Sec	Tp	R	B. & M.				
18398	11/5/58	Ted Robins and Mildred B. Robins	--	Spring tributary to Slate Creek	SE	NE	7	10N	5E	N	9,000 gpd	Jan 1-Dec 31	Domestic and Irrigation, 1 acre	P-11818
18421	12/3/58	P. L. and G. C. Lathrop	--	Deer Creek and tributaries	NW	SW	34	48N	4W	MD	1.0 cfs	Mar 15-Nov 15	Domestic, recreational, fish culture, and irrigation, 66.1 acres	P-11848
18471	1/12/59	Albert N. Jr. and Wynne P. Stafford	--	East and West Forks of Allgood Creek, Coon Creek, and Indian Boitens Creek (commingled)	SE	SW	16	11N	7E	N	2.75 cfs	Jan 1-Dec 31	Mining and domestic	P-11867
18563	3/2/59	George F. and Betty Reedy	--	Tributary to Indian Creek	SW	SW	23	17N	7E	N	365 gpd	Jan 1-Dec 31	Domestic	P-11983
18938	8/25/59	John B. Fitzgerald and Thomas Edward Fitzgerald	--	Bullhead Creek tributary to Bogus Creek	NW	SW	12	47N	5W	MD	2.0 cfs	Mar 15-Oct 1	Irrigation, 160 acres	P-12423
19213	2/3/60	Charles B. and Ethel P. Shannon	--	Ranch Gulch tributary to Klamath River	SE	NE	2	16N	7E	N	0.016 cfs	Jan 1-Dec 31	Domestic and irrigation, 1 acre	P-12532
19246	2/23/60	United States Reque River National Forest	--	Cook and Green Creek tributary to Middle Fork Applegate River	NW	NW	31	48N	11W	MD	6,500 gpd	Jan 1-Dec 31	Domestic and recreational	Incomplete
19247	2/23/60	United States Reque River National Forest	--	Springs tributary to Elliott Creek	SW	SW	13	48N	10W	MD	400 gpd	Jan 1-Dec 31	Domestic and stockwatering	Incomplete
19319	3/23/60	United States Six Rivers National Forest	--	Spring tributary	SW	NE	31	10N	5E	N	0.014 cfs	Jan 1-Dec 31	Domestic and irrigation, 1 acre	P-12456
19323	3/31/60	United States Klamath National Forest	--	Woodpecker Creek tributary to Indian Creek	SW	SW	3	17N	7E	N	0.10 cfs	Jan 1-Dec 31	Irrigation, 10 acres	Incomplete
19353	4/14/60	James Marshall Kinne	--	Spring tributary to Townsend Gulch	NW	SW	2	44N	11W	MD	0.31 cfs	Jan 1-Dec 31	Domestic and irrigation, 2.5 acres	Incomplete
19389	4/25/60	Karl H. and Mita D. Kutzer	--	Spring tributary to Klamath River	NE	NW	14	46N	10W	MD	500 gpd	Jan 1-Dec 31	Domestic	P-12582
19478	6/6/60	King Lewis	--	Klamath River tributary to Pacific Ocean	SW	SE	17	47N	5W	MD	0.25 cfs	Jan 1-Dec 31	Irrigation, 8 acres	Incomplete

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